

# AMERICAN Bee Journal

THE  
AMERICAN  
BEE JOURNAL.

EDITED BY SAMUEL WAGNER

VOLUME I-1861

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Year

One Hundredth  
Anniversary  
1861-1960

VOLUME 100

JANUARY 1960

NUMBER 1

# 1926 — 1960

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27	28	29	30	31		

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SUN	MON	TUE	WED	THU	FRI	SAT
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1960 MAY 1960						
SUN	MON	TUE	WED	THU	FRI	SAT
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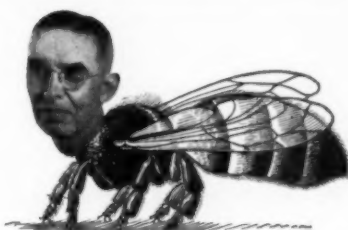


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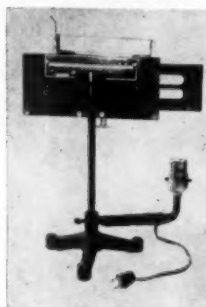
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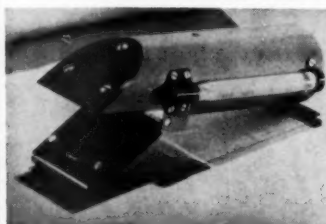
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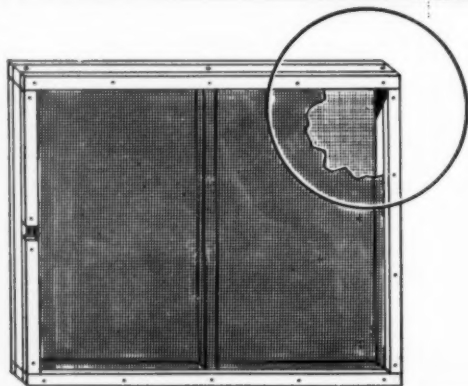
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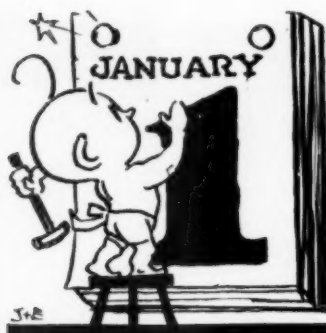


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1916



1923



1929

At the top of these two pages some of the covers of ABJ through the years are reproduced. The cover of the first volume appears on the front cover of this issue.

## BEE CULTURE

by SAMUEL WAGNER

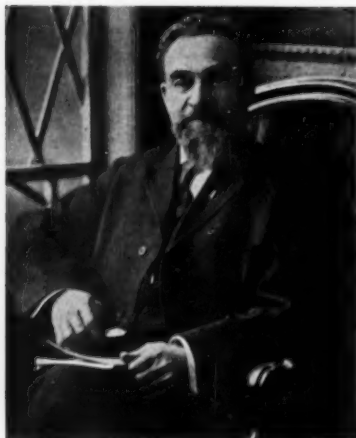
Bee Culture need no longer be a precarious and empirical pursuit. Discoveries and improvements comparatively recent, have so elucidated its principles, that its processes can be more definitely regulated than those of almost any other branch of rural economy. Without being divested in the least of that attractiveness which, from the earliest periods of history, drew to it the attention alike of the humble cottager and the inquiring student—making it a subject of unflagging interest and unfailing enjoyment, it now

claims additional regard from the fact that it can be so conducted as to become a source of certain and amply remunerating profit. It may be viewed, first, as a *science* having for its object the attainment of a correct knowledge of all that pertains to the life, habits and instincts of the honey bee; and, secondly, as a *practical art*, which regards all the attainments thus made and to be made, as the only reliable foundation of successful management.

The chief cause of the depressed condition of bee culture in general,

is not to be traced to any want of attention to the subject. It is to be found rather in an inadequate knowledge of and erroneous opinions concerning the physiology and habits of the insect; in the defective or ill-adapted construction of the hives, however differing in form and material, in which it has been doomed to live and labor; and in an injudicious mode of treatment. This, more than aught else, has prevented bee culture from making progress commensurate with the time and attention devoted to it. Despite the most

*"I want the American Bee Journal to be the finest publication about bees and beekeeping in the world"*

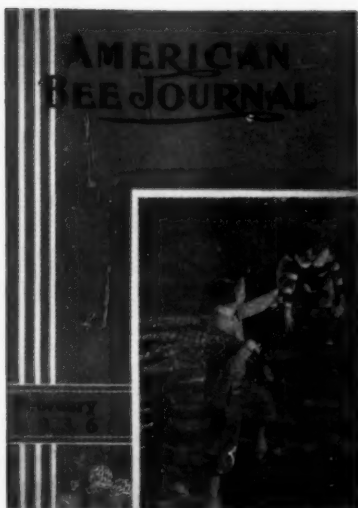


So said C. P. Dadant (left picture) when he became Editor in 1913. The article above, "Bee Culture," is what the first editor, Samuel Wagner, wrote in his first issue of ABJ, January, 1861, and gives his reasons why there should be a magazine for beekeepers. One hundred years later we salute him. We who worked with C. P. Dadant through the years became embued with his spirit as he guided our thoughts and efforts. He was a scholar loved all over the world. His desire for ABJ, handed to us when he passed on, remains still the goal towards which we are constantly striving.

\* \* \*

The Cover reproduction at the right for 1959 brings us to the end of the first century of effort.





1936



1943



1953

assiduous observation and study, the interior of the hive and the domestic economy of the colony, remained till recently and still remain for the masses, a *mystery*. The common beekeeper knew that he was the owner of a stock of bees; he knew also, if he knew much, that among them was a queen, and workers, and drones. But the peculiar functions of each kind or class, and their respective relations to each other were, and still are with most persons, matters of conjecture and dispute. Of the means, also, of properly directing the labors of a colony, of regulating its operations systematically, so as to secure desired ends, almost utter ignorance prevailed, and still prevails very generally. After the swarm was secured—whether with or without superstitious observances—the hive was placed on its stand, and the bees were allowed to prosecute their labors as best they might. If in peculiarly favorable seasons or locations, the stock happened to thrive satisfactorily, its owner was thought to have *luck*; but rarely had any one the vanity to claim success as the result of his management. And yet, duly allowing for the vicissitudes of seasons, certain and regular success does most essentially depend on *management*. An adequate knowledge of the nature, habits, and instincts of the insect having once been attained, and a thorough control of the operations of the colony secured by the use of properly-constructed hives, the business fairly and truly becomes a subject of mere management. The means of acquiring such knowledge

have now been made accessible, and hence we were warranted in stating, as we did, that bee culture need no longer be a precarious pursuit, but should be one regulated by system. The accumulated discoveries made within the last fifteen years, combined with deductions from facts previously recorded, have totally revolutionized the business, placed it on a firm foundation, and given it an impetus which must cause it to advance and flourish. Having reached this stage of development, it claims a higher appreciation, and deserves a more general diffusion than before. It can be successfully prosecuted to a large extent in almost every region of the temperate zone, and under almost any circumstances. It requires only a small amount of capital, and comparatively little room, and exacts so little time, that the ordinary intervals of leisure suffice. It may, indeed, be regarded as an agreeable relaxation from the severer toils of husbandry, the drudgery of mechanical occupation, or the worrying exactions of professional duty. It may furnish fit employment for the aged and the invalid.

But, in order to revive the business, to render it compensating, and to cause it to advance with steady pace, the establishment of a periodical paper, devoted to its interests, is highly important. In a country so extensive as this, where general Apiarian Conventions have not yet become customary, and beekeepers can seldom have personal intercourse with each other, a medium of communication, affording facilities for discussion and frequent interchange of opinions, is

evidently needed. Such a medium, for those engaged in congenial pursuits, the "AMERICAN BEE JOURNAL" is intended to be; and such, with the aid and support of those for whose benefit it is specially intended, it may speedily become. It will serve, likewise, as a repository of whatever is, directly or collaterally, of practical value in this department of rural economy; and as a vehicle by which information can be readily, rapidly, and widely diffused, so that the early introduction of useful improvements may be secured. Such a periodical, will tend also to increase the number of apiarians, and thus make bee culture a business of more general importance, demonstrating, finally, that a vast and seemingly inexhaustible source of national wealth has hitherto been greatly neglected.

It is not proposed to give the Bee Journal a predominantly scientific cast. Aware that to be extensively useful, it must adapt itself to the wants of the community, it will constantly regard that object. Its contents must be diversified. Its columns must be accessible alike to the apiarian, whose experience and observations enable him to communicate information, and to the inquirer whose primary desire is to obtain instruction. But while aiming to render bee culture more popular, and foster its extension, the Bee Journal will endeavor to attract to it the attention of professed students of natural science, and such may be assured that it is a subject worthy of their powers. That which engaged the faculties of a Columella, an Aristotle and a Celsus, among the

ancients, and of a Swammerdam, a Reaumur and a Huber, among the moderns, cannot certainly be devoid of attraction for an inquiring mind. It possesses fascination enough to engender even enthusiasm in its votaries, and much as has latterly been accomplished in the elucidation of obscure points, there remain mysteries enough to be explored and explained, to employ the most astute intellect. It is surprising, indeed, that the physiology and natural history of the honey bee have been made the subject of original investigation in so limited a degree by American naturalists. What has been done in that direction in this country, was done almost exclusively by men who commenced simply as apiarians; and nearly all that is to be found in treatises purely scientific, is a mere rehash from foreign publications substantially antiquated. This fact is not creditable to American genius; and now that a Leuckart, a Von Siebold, and a Donhoff, in Germany, have set the example of renewed personal investigation, it is to be hoped that this inviting field will no longer be left unexplored by congenial minds here.

From the days of Aristotle to those of Swammerdam, (a period of nearly two thousand years,) little progress was made. The advance from the time of the latter to that of Huber was small, and thenceforward to the time of Gundelach, not much was added. With the annunciation, however, of Dzierzon's theory, a new era commenced; and though that theory encountered warm opposition, and excited a protracted controversy, it has triumphantly sustained itself, and led to further important discoveries. Hence the day cannot be distant when bee culture may, so far as the theory is involved, be regarded as having assumed an impregnable position.

In the earlier part of its career, the German *Bienenzeitung* had to contend with difficulties, such as will not have to be encountered here. Bee culture had long been a subject of general interest and study in Germany. Various theories had been framed, to explain the mysteries which its advocates recognized as existing; and the authors and adherents of these several theories, clung fondly to their preconceived notions, defending them oft with intemperate ardor. So long as it seemed conceded that any one of these theories might be true, and all of them were treated with equal deference, the *Bienenzeitung* moved along smoothly. But when Dzierzon

advanced his new theory, though modestly submitting it at first in the form of an hypothesis, a different state of affairs ensued. The old schools felt intuitively that if this new doctrine be true, it involved the subversion and repudiation of all the subsisting theories. It was at once made an object of attack from all quarters; and a violent controversy, not unmingled with acrimonious personalities, followed. Dzierzon defended his theory with great dialectic skill, for which his training and large experience in bee culture eminently qualified him. Then turning on his assailants, he exposed their fallacies and the inconsistency of their views, and arrayed against them the evidence of incontrovertible facts. Some of the old correspondents of the *Bienenzeitung* began to complain and remonstrate, and finally many of them withdrew. But the truth was rapidly making converts on every hand; and when Berlepsch, who had vauntingly denounced the new theory, proclaimed his conversion; and Kleine, Orttel, and other distinguished apiarians, became its advocates, a new and highly intelligent corps of contributors soon made amends for the defection. The impartial course of the *Bienenzeitung*, pending the controversy, was acknowledged; its policy vindicated; and, in its speciality, it now enjoys universal esteem. Difficulties like these, the American Bee Journal need scarcely apprehend. There are no cliques or parties here, advocating theories or systems which they cherish with the prejudice of paternal affection. Hence, though there may be differences of opinion, frank investigation will be acceptable to all, and intemperate zeal will hardly obtrude itself, with its unreasoning obstinacy.

In conducting this Journal our aim will be to promote bee culture as a systematic practical pursuit, based on established principles and ascertained facts. In furtherance of this object, while we invite and will give scope to full and free, yet temperate and courteous discussion, we shall unreservedly, as occasion may require, express our own views and convictions—striving to place before the reader, the information requisite for intelligent judgment, on any topic that may claim attention or deserve notice.

We conceive that we have the means to render the Bee Journal both interesting and instructive; and our endeavor will be to make it not only a welcome visitor, but a valuable and reliable counsellor. It must, however,

not be supposed that the paper is designed for those only who purpose engaging in bee culture on an extensive scale, and adopting the methods and processes so highly appreciated abroad. It contemplates more general usefulness, and will address itself with equal earnestness, to that much more numerous class, whose operations are necessarily restricted within narrower limits. The most certain means of securing progress, are to be found in that which will enable common bee keepers, who still use only the simple straw, to prosecute the business with due success and satisfaction—thus inducing them finally to join in the march of improvement. Hence, all, and such especially, are invited to communicate with us freely, stating any difficulties they may have to encounter, or any vexations they may experience in this pursuit; giving us an account of their own peculiar methods and manipulations; or relating whatever of new or strange, in this department, comes under their notice—their joys and sorrows, as apiarians; their successes as well as mishaps.

Our desire is, of course, that beekeepers, generally, would become readers and correspondents of the Journal; and that each should regard it, for himself, as a medium of imparting, as well as of receiving information. We ask them to send us their queries, their suggestions, their remarks, and their criticisms, as well as the results of their reflections and experiments. Let them here record their observations, and relate their experience; and much that is valuable cannot fail to be elicited for the general benefit. Let them derive a heat from their favorite insect, which by concord and co-operative industry, insures the prosperity of the colony.

#### From 1861, page 258

No second swarm issues from a colony unless *teeting* or *teeting* and *quahking* are previously heard. *Teeting* alone is heard when a queen has emerged from her cell, while the other royal embryos are not yet mature; whereas both *teeting* and *quahking* will be heard when one queen has emerged, while the others, though fully fledged, remain in their cells in apprehension of impending danger.

#### From 1861, page 157

Queens reared and fecundated before the middle of May, or in August and September, are said to be less prolific than such as are reared in the intermediate period.

To give you some understanding of the pattern to be followed in this Hundredth Anniversary volume, the first or lead article in each issue will be the main theme for the month. There will be two parts to the theme—the first will be historical; the second will be a projection into the future and what it may mean to us. Since the Wagner proclamation starts the year off, the Historical and Future themes are concerned with the literature about beekeeping.

## EARLY AMERICAN LITERATURE

by M. G. DADANT

In summarizing the literature of the early years of the American Bee Journal, it is only fair to go back previous to that time and get some idea of the events which occurred which not only deeply tinged the make-up of the American Bee Journal but also gave the causes thereof. Let us consider in the first place that, although scientists in Germany and on the continent had been active in investigating the bees, it was not until the blind naturalist, Huber, with his assistant Burnens, made such minute and careful observations and reported them in such a manner as to leave no doubt as to many questions concerning the natural history of the bee. For instance, the fact that the queen is mated in air. This was about the turn of the century 1799-1804.

However, the findings of Huber were not completely accepted, particularly by the English writers, among whom probably the most important was Robert Huish (1817). He not only did not recognize the work of Huber, but, in a manner, "poked fun" at Huber's observations because they were made while he was blind and through a second party, to be recorded even by a third party. Huish maintained that the drone fertilized the eggs in the comb.

These criticisms of the blind Huber were repeated in early American books also, taking quotations from Huish, and I mention here in particular F. Butler (1819) and James Thatcher (1829), both of whom mentioned Huber, but were quick to suggest the possibility of a very grave error in the work of Huber on account of the method in which the material had been gathered. I mention Huber in particular because not only was he a great naturalist and observer, but he had also designed a hive with a frame "of sorts." At least Huber's "leaf hive" could be opened and the leaves or frames of the hive could be swung around, each on a hinge, in order to observe the frame next to it.

This is quite distinctive. No doubt when Moses Quinby was writing his book, which was to appear in 1853

(the same year as the Langstroth book), he apparently based the frames on Langstroth's experiments and on the Debeauvois frame. Charles Dadant had read of the Debeauvois frame in France and had used it previous to the announcement of the invention of the actual movable frame hive by Langstroth. Both the Debeauvois hive of France and the Huber hive, as well as the Quinby hive, failed in that they did not allow a bee space on the ends, sides, top and between the frames, so that any time there was an effort made to open the hive, it was a question of cutting loose all the separate sections of the hive or else prying out the sides of the hive. The writer can readily remember in his earlier days of beekeeping when the Dadants bought out an apiary of Quinby hives. They were four sides hooked together with ordinary screen hooks. The frames fitted closely against the ends of the hive, as well as the sides with a close end frame (no spaces) and it was necessary almost to "tear the hive to pieces" to be able to get into it and look at the bees for queen and stores.

So we have the history of rudimentary frame and a better idea of the workings of the hive around the turn of the century or 60 years before the American Bee Journal first appeared.

In the interim between these activities and the publication of the American Bee Journal, several books were published in America on beekeeping, most of them of course, in the eastern states. It is significant that at about this same time there occurred an infestation of the wax moth which apparently had been brought over from Europe around 1800 and all the books, as well as magazines, were quite taken up with the necessity of finding a way of combating this pest. Drugs at that time were not even thought of for such a purpose, the principal way of fighting the moth being to light candles in front of the hives in the evening and thus kill most of the moths so they could do no damage within the hive through their off-



spring. Fortunately, the question of bee diseases did not appear until after the publication of the first volume of the American Bee Journal.

In the meantime, Johannes Mehring, in Germany, had invented the bee comb foundation for the base of the honeycomb. Immediately thereafter came the book of Langstroth's, "The Hive and the Honeybee," in which his hive, and particularly his frame with bee space all around, were definitely explained to the public. No doubt Samuel Wagner, who had been a great reader of European periodicals and books, saw that this offered an opportunity for a definite and strong growth of beekeeping on the American continent, particularly as the population was actually increasing from year to year. Natural resources were still at their highest so bees would thrive anywhere.

Langstroth, like many writers of books in both the U.S.A. and in Europe before him, patented his hive. In fact if we would look through the literature of those early years previous to the American Bee Journal we will see that nearly all the books were founded upon a special patented or designed hive which the author of the book wished to sell. The sad part about it, when a really practical hive was at last found by Langstroth, his inventions, although patented, never yielded him enough to make it worth while. His claims were contested by many other beekeepers who either copied after him or claimed as much for their hive or claimed a previous invention of the movable comb.

By this time two other early worthy books had appeared. One by W. C. Harbison, in 1860, and the other by John Harbison, who was later to

become famed for his large productions of honey in California and his shipments of carloads to the eastern seaboard.

So we have the general picture of the literature and the thoughts of the beekeeping public at the time Samuel Wagner came out with his first issue of the American Bee Journal in January 1861. He had not only become conversant with all the European bee literature, but also had followed Mr. Langstroth very closely.

The early numbers of the American Bee Journal were devoted to an explanation of the actual history of the bee as it had appeared in the European works and in the "late come" American works of Langstroth, Quinby, and the two Harbisons. In addition there were, of course, explanations of various methods of handling bees. Also another feature had just come into the picture, namely, the importation of Italian bees which were considered highly superior to the little black bees of the United States, which apparently had been imported from northern Europe even previous to the time of the Pilgrims. Therefore there was a desire to test this new bee along with other races, such as the Caucasian, Carniolan and Egyptian, which was subsequently done during the intervening years before the end of the 19th century.

It was also a time of experimentation. Strangely enough, although the extractor, or "honey machine" as it was called in the early American literature, was invented in 1865, it did not reach the United States, or at least become publicized in the American Bee Journal, until 1868.

And so it was in the early issues

of the American Bee Journal that a combination of wisdom from abroad, as well as inventions was interspersed with very definite and sometimes acrimonious criticism both of the other fellow's hive and of the other fellow's method of producing honey. The readers of the early numbers of the magazine were not only highly interested but willing to express their opinions definitely and vociferously. This was perhaps particularly true of those who had fought against the claims of Langstroth and his movable-comb hive and had set out to sell hives of their own brand which were in most instances patterned exactly after the Langstroth hive. It was also an opportunity for expression of those like Charles Dadant, who defended Langstroth and his frame.

It is interesting to note that the American Bee Journal was the first bee journal published in the English language even though hundreds of books had appeared on beekeeping and magazines had devoted considerable space to bees and beekeeping. During the course of the past 100 years there have been over 100 bee publications begun in the United States; and by this we mean publications which might be considered national in scope, in addition to many county and state bulletins and papers, some of which have gone on for a number of years. Besides the names of Samuel Wagner and Langstroth, two other names still in the beekeeping knowledge appeared in the early numbers. One of these was Charles Dadant who wrote on various subjects, as well as defending vehemently the claims that Langstroth had the first actually movable-comb hive, since he had tried pat-

terns of the others in this country before the Langstroth. He had read of other European hives in the French bee papers. The other party mentioned is A.I. Root who appeared in the early American Bee Journal numbers as "Novice." He was later, in 1873, just twelve years after the beginning of the American Bee Journal, to start "Gleanings in Bee Culture."

These two publications, the American Bee Journal and Gleanings in Bee Culture, are the only two which have survived throughout the whole of the period between 1873 and the present time.

Other publications which were quite prominent, particularly in the earlier days, are Beekeepers Magazine 1872-1887, The Bee World 1873-1877, National Bee Journal 1870, New England Apiary 1883, North American Bee Journal 1872, Illustrated Bee Journal 1869-70, Annals of Bee Culture 1869-72. You will notice that the only ones mentioned above are those which appeared in the interim between the beginning of the American Bee Journal and the starting of the second American bee publication "Gleanings in Bee Culture."

Those early years were so full of opportunities and the movement of populations so great, that it would be hard to include in one article the change in the literature in the American beekeeping press from 1861 through 1959. However, in a general way, the first years were "formative" years, years of argumentation and claims; years of the actual foundation of the industry which had by this time been given the advantage not only of bee comb foundation, but also of the honey extractor and of the Langstroth hive.

## Present Day HOW-TO-DO-IT

### Clipping the Queen

It is sometimes difficult to hold a queen bee without injuring her in the process of clipping her wings. I have found a method of holding the queen which for me is simpler and which does not jeopardize the queen. It consists of holding the queen down upon the surface of the comb with a small holder. The holder is made out of a piece of comb honey section, approximately 3" by 3/4". I cut out a part of the one end with a penknife so that two small 1/4" arms extend. Across the ends of these arms I place a small rubber band which fits snugly. This I glue in place with a few

drops of rubber cement and the holder is ready. When the queen is located on the comb, I lay the frame down on the top of the other frames and it is quite simple to hold down the queen upon the comb for a moment with the rubber band holder in one hand, while you clip the wings with small manicuring scissors in the other hand. I have found snub-nosed manicuring scissors the safest. With little practice one can hold the queen across the thorax, (never the abdomen), clip her wings and let her go quickly and safely.

J. Herbert Fretz  
South Dakota

### Strong Colonies

A hundred thousand bees in one hive in a good location, with conditions ideal, will result in a large quantity of surplus honey. The same number of bees in five hives, 20,000 bees to the colony, may each store only enough for their own existence.

An experiment I have often performed will show the importance of a good queen, plenty of bees and a good flow of nectar. Just before the nectar flow fortify a colony by adding sealed brood from another colony. You will be amazed at the amount of honey the strengthened colony will produce and it will show you the possibilities of a two-queen system.

Harry T. Starnes  
Crawfordsville Indiana

Now that Maurice has covered the literature of the past, follow along with GH as he suggests what we read may formulate for us in the beekeeping of tomorrow. Suppose we try the new things and see what happens.

## I-M-P-A-C-T-S On The Future

by G. H. CALE

In this first anniversary issue we are following a pattern to be used each month through the year. It seemed appropriate to start off with literature, including the Wagner explanation of why he thought it profitable to establish the American Bee Journal.

The very first article in every issue if possible will be based on an important development in beekeeping, first the history of the development, immediately followed by a second article on the future importance of the subject under discussion. These introductory articles each month will cover the development of queen rearing and hybrid bees; the development and importance of comb foundation; the control of bee disease; the development of pollination; the development of the beehive; the history of migration; changes in marketing; wintering; and a consideration of bees with respect to apiary management.

It seemed to be my job to discuss the importance of beekeeping literature in relation to the future to which I have given the heading at the beginning of this article "Impacts on the Future."

I scarcely know how to begin, because all through the literature way back in the past there has always been a future impact either on the practical beekeeper, the student, the scientist, or the historian. Perhaps this is a trite thing to say because it is true about almost any part of human endeavor. Nevertheless there have been some very important contributions which have changed our understanding of what to do in practical beekeeping; in management for honey production, queen rearing, package bee production or what have you.

Perhaps I am as well qualified as anyone to point out some significant things which may have considerable importance in future management for honey production. This is a field that is constantly changing.

I think one of the most important contributions to the future has been the development of hybrid bees. I am

not fully aware of what the use of these bees, which are so rapidly changing, may mean to me in honey production but I can see clearly that the value of future hybrids must lie primarily in an increase in honey production without any added cost other than the maintenance of stock. A 10 per cent increase in honey, for instance, in an outfit of 1000 colonies, might well mean, on a basic annual production of 100 pounds, a 10,000 pound increase in honey which at present market valuation would increase the net profit to the operator anywhere from \$1,000 to \$1,200. It is more spectacular to give this example from large commercial production but the small or sideline commercial operator can figure his additional income on the same basis. It is just as highly important to him as it is to the commercial operator that hybrids carry the distinctive and reliable characteristic of increased production.

One of the possible future impacts of hybrid bees is in the possibility of diversified usefulness. We may have hybrid bees for pollination, hybrids for comb honey production, hybrids for locality, etc. So hybrid information is becoming an increasing part of our reading as time goes on and it is in the literature that the beekeeper will find the meaning of these advancements to him in his own beekeeping practices.

Another future development in our understanding comes from what we read about the wintering of bees. This will be covered more completely later in the year by Dr. C. L. Farrar, Head of the Office of Bee Culture U.S.D.A. at Madison. No other man has made more contribution to this subject nor has brought about a greater change not yet fully understood in its future application.

We sometimes belittle the importance of an understanding of the life and habits and anatomy of honey bees. This attitude is not fair to those who have given so much time to these subjects. The difficulty is mostly with



a lack of understanding by the reader. If we think about what has been found out about bee behavior in relation to what we do in the bee yard we will discover there are many things from which we could benefit if we understood the application of the facts.

One of the most important contributions to our literature is "The Anatomy of the Honey Bee" by R. E. Snodgrass published by the Comstock Publishing Assoc., a division of the Cornell University Press, Ithaca, New York. This is a recent book dated 1956 and brings anatomy up to the moment. Every part of the bee's body is included in this monumental work. Here are some questions to ask yourself. How does the bee breathe? If you know, then you can understand practices based on breathing like ventilation, honey removal, or the use of ammonium nitrate. The legs of the bee; how are they used as carriers of pollen and propolis? The wing movements of flight, the wax glands and wax manipulation, the sting, the reproductive system, including insemination.

As practical phases of anatomy and behavior, consider the recently established fact that a virgin queen mates several times at a distance away from home and that the sperm of these matings remains segregated in the spermatheca to be used more or less in succession. This explains differences in the worker population of colonies and in their behavior. It may also be indirectly connected with multiple queen occurrence in colonies which is more frequent than otherwise for periods of time during the life of a colony. This has a very important bearing on practice as you can easily estimate for yourself.

Perhaps one of the most important contributions recently is "The World of the Honey Bee" by Colin Butler of the Bee Department of Rothamsted, England. One can pick out from this master book many points of application to practice. One of the most important is his idea of what he calls "queen substance," an actual bodily coverage of a peculiar chemical on glandular material which has a stabilizing influence on the queen's life in the colony. Without this substance superseding occurs. It is tied up with swarming and with the concept already mentioned of multiple queens; an immense field for management development.

Perhaps one of the most interesting behavior studies is that by Ronald Ribbands in his book "The Behavior

and Social Life of Honey Bees." It has considerable in it about the flight behavior of bees which is linked up to locations and competition for nectar which is in turn directly related to the selection of locations with respect to flight distances. For instance, we are now finding that small yards within the same area and even overlapping in flight range, are perhaps more satisfactory for crops than large yards at the old distances of two or more miles. There are many other very practical applications which can be obtained from this book. There is considerable discussion of mating ranges and the flight patterns of drones and queens, also a discussion of communications in relation to obtaining honey; dances of the bees, scent directions and their importance

to location. Other subjects; nectar ripening, hive humidity, winter temperature regulations, brood rearing activities, swarming and the causes of swarming, length of life. It therefore is a must in any beekeeper's library.

Space does not allow more than this general indication of the impact of literature on the beekeeping of tomorrow but they are there for us to discover and put into practice. As changes occur we can expect to look forward to a different concept of beekeeping practice. The youngsters that grow up with these new ideas will leave us far behind. They will know more about how to do, what to do, when to do, and what to expect. It certainly is a challenge and I wish all of us could experience its exciting opportunities.

## Let's Get Back To Today For A Moment

### North Dakota

#### "Beginning Beekeeping"

Published in March by the North Dakota Agricultural College Extension Service, "Beginning Beekeeping" is a twelve page Circular (A-310) authored by Dr. R. L. Post, Associate Entomologist, and Wayne J. Colberg, Extension Entomologist. It is well illustrated and covers methods of getting started, beekeeping equipment, characteristics of honey bees, life history, management methods, products, and bee diseases. Copies may be obtained from the Extension Service, North Dakota Agricultural College, Fargo, North Dakota.



DR. SCHOEL VISITS SUPERIOR

### Queen of Honey In Quebec

For the first time in the history of the Provincial Exposition at Quebec, a woman has carried off the honors, and is designated "Queen of Honey" according to "L'Abeille et L'erable" for November. But the honor was not new to the family since the year previous her husband was named champion apiculturist for Canada. Mrs. Lucie Deschamps and her husband Gerard operate 400 colonies of bees, prepare their colonies, harvest the crop and market their honey. In addition there is a family of five children at home ages from 3½ to 11.

It is significant that Germany regards the honey industry in this country so highly that a visit for Dr. Wilhelm Schoel, Agricultural Secretary for the German Embassy, and his attractive wife was scheduled at the South Gate plant (Los Angeles) of the Superior Honey Company. Dr. Schoel spent some time going through the plant and showed keen interest in the packaging and handling operations. In picture, left to right, Edmund Blaine, Agricultural Marketing Specialist, U.S.D.A.; R. C. Stone of Superior; Mrs. and Dr. Schoel; and Wendell Shore, Export Manager.

### Safflower In Canada

Soybean Digest for October, reports safflower as increasing in popularity in western Canada, particularly in the "dryland" acreages. As against 15,000 acres in 1947, there was planted

in 1958, 18,000 acres in Alberta and 27,000 acres in Saskatchewan.

Pellett (American Honey Plants) reports safflower as a good nectar producer in western Iowa. It would be interesting to have reports on the new producing areas.

# SAMUEL WAGNER

from "The Lives of Famous Beekeepers"

by KENT L. PELLETT - October 1929

A. I. Root published the "beekeepers' medley." This ebullient little man always was afoot with something novel; now he published on a large mounting the faces of beekeepers he considered worthy of note, arranging them according to his own lights, a hundred of the great and near-great, a medley of the faces which had become distinct from the mass of their fellows.

The portraits of the best known of his day were there: Quinby, Newman, Grimm, Langstroth, Hetherington, the Dadants, Cook, Doolittle, and others. One face, however, was missing, one who had stayed in the background, aloof from the pushing throng who were casting American beekeeping, yet vitally a part of them—the face of Samuel Wagner, the first editor of the American Bee Journal.

Aloof he may have been, and reserved, yet the old German's cool pen had guided his brothers clear of rocks the first years of American beekeeping, and his portrait should not have been left out of the medley.

But Root could find nowhere a portrait of him. Friends told him that Wagner had shrunk from the eye of the camera, had never allowed his likeness to be taken. Root turned to Father Langstroth. He and Wagner had been good friends; perhaps he could find a way out of the difficulty.

Langstroth knew of no photograph of Wagner, but he did know of a man who was Wagner's counterpart. Their best friends often had confused the two when Wagner had been living. This man's picture he sent to Root, who included it in the gallery. Thus by proxy Editor Wagner was placed among the lights of beekeeperdom.

Samuel Wagner was born two years before the break of the nineteenth century. His father was pastor of the German Reformed Church at York, Pennsylvania, and Sam was ten years old before he began to learn the English language. But he made good use of the years spent

at the parochial school and at the York County Academy, and at twenty-six he was able to buy the York Recorder and begin his career as an editor.

But, in the course of a few years, for reasons which his biographers have failed to tell—chroniclers are forever overlooking the vital points of a man's life story, in their zeal to record the places where he lived and the years he lived there—Wagner forsook journalism and became cashier of a York bank. This position he held until his later sixties, when he became for five years the disbursing officer of the Senate.

His hobby was bees. Believing that there were enough beekeepers in the United States to support an apicultural magazine, in 1861 he began the publication of a plain little sheet which he called "The American Bee Journal." But bee men, scattered and not yet inured to the rigors of book learning, supported very poorly the first American bee magazine. Then came the first claps of the Civil War. They grew louder, and Wagner discontinued the little paper.

But the war, which cut off the supply of southern sugar from the North, caused the price of sweets to rocket, and housewives demanded honey. Bees became a subject of more general interest, and after the war, at the request of his friends, Wagner again opened the columns of the American Bee Journal. This time the venture was a success and he continued to edit the magazine until his death, six years later.

These were the outward milestones in the life of Samuel Wagner: editor of a country newspaper, cashier of a bank, disbursing officer of the Senate, editor of a small bee magazine—prosaic, no doubt; and only a few of his closer friends knew the richness of his inner milestones and the extent and variety of his knowledge, half-hid by a reticent personality.

He was well acquainted with American history, with the history of his church; when he had become interested in bees, he had taken care

to learn as much of beekeeping literature and history, and acquired the best library of German beekeeping literature then in America. He subscribed for the Nordlinger Bienenzeitung, the German bee magazine, with the first issue, and kept a complete file of the magazine.

During the late 1840's a fracas was raised in the pages of the Bienenzeitung. Dzierzon had advanced his theory of parthenogenesis and was engaged in controversy with the naturalists and theorists of various sorts whose pet hypotheses he had upset. Wagner followed the stubborn battlings of the German cure with interest, and ordered his book, "The Theory and Practice of Bee Culture." He perused it carefully and was soon convinced that Dzierzon's system of movable comb beekeeping was better than the box-hive beekeeping practiced in America. He decided to translate the book into English, and in this way to spread the advanced Dzierzon methods among the American farmers.

Several months were spent in translation, and when the manuscript was completed he loaned it to Reverend Berg, of Philadelphia another beekeeping devotee. Berg was impressed and urged Wagner to publish the manuscript at once.

Berg was not acquainted with German beekeeping, but he read desultory contributions by Americans in the farm magazine. He found interesting the writings of a certain Reverend Langstroth, who displayed a knowledge and an understanding of bee behavior beyond the ordinary. Berg decided to visit him in his West Philadelphia home.

Berg found Langstroth in his apiary, and was surprised, for he was using a bar hive, and seemed acquainted with many of the practices of Dzierzon, although he never had heard of the cure. He had worked out a system of beekeeping more perfect than any Berg had believed to exist in America. Berg told Langstroth of Wagner and the Dzierzon book which he had translated, which he sent to Langstroth upon reaching home.

Langstroth was soon writing to Samuel Wagner and telling him of his amazement that another had preceded him in discoveries he had thought his own. Yet, he believed his hive had points of superiority. He invited Wagner to come and see him. Wagner found the Philadelphia clergyman a charming correspondent and decided to accept his invitation.

Langstroth was not at home when Wagner arrived; but in his absence Wagner explored the apiary thoroughly, opening and examining the clergyman's peculiar hives. Now it was Wagner who was amazed. Here were put in practice principles of the book he had taken months to translate. Here were the movable combs that Dzierzon advocated. But the details of operation were different and the hives of the two masters did not at all resemble each other in appearance. Wagner admitted to himself as he glanced through the hives and handled the combs that here was a perfection and simplicity that Dzierzon himself had not attained.

As he went home he looked into the future of American beekeeping. He had dreamed of becoming the benefactor of American bee men, of helping them to better their practice by publishing the book of Dzierzon, but now he happily put that dream aside. Langstroth with his movable frames had gone beyond the German cure—he should be the prophet of the new beekeeping.

He urged Langstroth to write a text on beekeeping and publish his discovery to the world. It was what Langstroth had in mind, and within a few months he was in a fever of work preparing his manuscript. It was published, and Langstroth's system slowly captured America. Wagner tucked his manuscript away in a drawer, where it remained; and later, when the first translation of Dzierzon's "Theory and Practice of Bee Culture" was given to the American beekeepers, it was done by a hand other than that of Samuel Wagner.

Wagner and Langstroth became the best of friends, and together undertook several ventures. Wagner, becoming interested in the success of the Germans with the Italian bees, in 1856 had ordered some of the yellow bees shipped to him; but the mate on the boat had proved a hungry fellow and had stolen all the honey, leaving the bees to starve before they reached New York.

Three years later Wagner and Langstroth, with a man named Colvin, made another attempt to import the Italians. But by that time others had seen their possibilities. Parsons was importing some stocks for the United States Government, and P. J. Mahan also was making the attempt. The three cargoes of bees all were on the same ship. There was haste as the ship docked. Who would have the honor of landing the first Italian bees on American soil? A hive belonging to Parsons was smashed as it was thrown to the dock. The captain of the boat walked ashore with one of the hives of Wagner, Langstroth, and Colvin, and proclaimed the bees the first Italians to reach America. The honor remained a mooted one. All parties claimed it.

Langstroth often wrote for the American Bee Journal. Where could have been found a better team for the establishment of the first American bee magazine than the inventor of movable frames and the scholarly old German, who, versed in the pages of the past, yet followed closely the developments that were treading on each other's heels in that turbulent day? The American Bee Journal, in those first years when Wagner's calm and restrained hand guided it, was a model of apicultural scholarship, of careful editing. Wagner barred from its columns the contentions and disputes that were for years to fill the pages of the later magazines.

His chief fault, perhaps, for representing the times, was that he was too much the scholar, restrained in a period when everybody was excited and when rural people had little time for the niceties of book learning, but loved nothing so much as a battle of wits or of words. Wagner held himself aloof. Other editors contended for special systems and punched the editorial noses of their rivals.

The old American Bee Journal may have been quiet and dignified in tone, but in its pages were chronicled the happenings of the most significant years of American beekeeping. There appeared the evidence for the Dzierzon theory of parthenogenesis, the first record of the sight of a mating of a queen and drone, and the story of the invention of the honey extractor, with a picture showing its construction. In its columns were printed the minutes of the first convention of American beekeepers, the record of the successful propagation of the Italian bees in the United States, the story of the growing popularity of the Langstroth system.

In Wagner's last days, however, one severe controversy racked the Journal. When, after H. A. King had for years openly sold hives infringing on his patent, Langstroth brought suit against King, Wagner considered the case of so much importance that he opened his columns to all the evidence that might be offered by both parties. King went to Europe searching for proof that Langstroth was not the true inventor of the movable-frame hives, and came back with statements of leading Europeans which seemed to prove their priority as inventors.

Wagner printed King's evidence, with refuting statements by Langstroth. He also printed a letter from Charles Dadant. Dadant had worked with the movable-frame hives invented by the Europeans prior to the Langstroth hive, and he wrote that they were impractical compared to the Langstroth hive. Wagner sent the letter to be printed in the Journal, with a few words of his own appended. "King may begin to suspect," he wrote, "that his efforts at deception have not been quite as successful, in this instance, as he hoped they would."

He laid aside his pen. These words, the first harsh words he had written for the Journal, were also the last which ever appeared in print over his name, as a few mornings later he died suddenly.

It was a fortnight before King felt, through the American Bee Journal, the rebuke of Samuel Wagner.

#### From ABJ 1861, page 177 EXCELLENT ADVICE

If thou wilt have the favor of thy bees, that they sting thee not, thou must avoid some things which offend them. Thou must not be uncleanly; for impurity and sluttishness (themselves being most chaste and neat,) they utterly abhor. Thou must not come among them smelling of sweat, or having a stinking breath, caused through eating of leeks, onions, garlic and the like. Thou must not be given to surfeiting or drunkenness; thou must not come puffing and blowing unto them, neither hastily stir among them, nor resolutely defend thyself when they seem to threaten thee; but softly moving thy hand before thy face, gently put them by. And lastly, thou must be no stranger to them. In a word, thou must be chaste, cleanly, sweet, sober, quiet and familiar; so will they love thee and know thee from all others.—

BUTLER

## Time Again for Intermission

### Caraway Seed Objectionable

We have a report from one of our subscribers that a parochial school near them succeeded in getting bees out of their attic of the parochial school by scattering caraway seed in and around the section where the bees were located.

We have never heard of this before and are wondering whether perhaps there may have been a "mistake in identity." Has any one of our subscribers ever heard of the use of caraway seed in this particular?

Many times bees are extremely difficult to dislodge from uncomfortable locations. Perhaps this might be the solution.

### Sweet Clover Seed Crop Short

According to the U. S. Department of Agriculture the sweet clover seed crop for 1959 promises to be the smallest in sixteen years with an estimate of twenty five millions pounds or 3% less than last year which was in itself a short crop. In order the largest producers of seed are South Dakota, Nebraska, Texas, Minnesota, Kansas and Colorado.

White clover and Ladino crops are larger. Estimates from the U. S. Department of Agriculture indicate Dutch white clover seed this year will be about 50% higher than in 1958.

On the other hand alsike is the smallest on record since 1919 with a total of 6½ million pounds, 26 per cent below the 1958 production.

### Warrior Vetch Yields Heavily

The Seedsman's Digest for September reports seed yields of over 600 pounds per acre obtained in field tests on warrior vetch. This vetch was developed by the Alabama Agricultural Experiment Station.

The new variety does not shatter as readily although it produces some volunteer plants. Warrior cannot be depended on to reseed itself. No report is made as to its value as a nectar producing plant. It is anticipated that seed supplies will be available in 1960.

January, 1960



### A REALLY BIG COLONY

These bees had been in this farm home several years using a hole through the siding that once conducted an electric light wire. When the Shumans decided to do some remodeling the bees had to be removed. When the plaster covering was removed the 5½ x 2 foot double comb was revealed from near the ceiling in the space between the studding down nearly to the floor. It weighed about forty pounds including comb, brood and honey. Dr. E. P. Hummel, Sterling, Colorado



### FLORIDA 4-H CHAMPS RECEIVE BEEKEEPING SCHOLARSHIPS

At left, Judith Whiteley, Miami, 1959 Florida Honey Queen. At right, Nancy Tate, Center Hill who won Blue Ribbon in honey baking two years at Beekeepers' Institute. At left, Michael Fields, Bushnell, and at right, Bill Peeples, Sebring, have progressive 4-H apiary projects. — John D. Haynie, Extension Apiculturist, Florida



# The Commercial Operator

A FLASHBACK . . .

## Remember When?

Some of us can go right back to our young days (and that is a long run of years) when commercial beekeeping was small by present standards. Bee yards were close and not far away. Transportation was by horse and wagon and it was not unusual, at a distance of no more than 15 miles, to stay overnight or as many nights as were necessary to finish the job at hand. The landlord's wife or daughter would furnish the meals and the landlord got a share of the crop.

It's surprising how much honey three or four men could run out in

a day with nothing to work with but a hand extractor, a pail, a funnel and tight barrels. Supers were taken off by brushing the bees from the combs. Then they were carried to the honey house in a handbarrow. So there would be a two-man yard crew and a two- or three-man house crew. When the job was done, the barrels of honey were loaded on the wagon and the poor horses had to pull it all the way back home where the barrels might be stored on the lower floor and covered with hay.

This is a good example of the operations of one outfit engaged in commercial beekeeping. With these

arrangements it was not very difficult to secure consent for a location for bees since there was a share going to the landlord. He not only got a share of the honey for the location but for the food and conveniences and for notification about such things as swarming or the need for feeding or the start of a flow and oftentimes he might even work with the boss and his crew with whatever the job was. Of course all operations were on the out yard basis. There was no such thing as a central plant. Such a commercial outfit seldom numbered more than three or four hundred colonies.

## HONEY COMB CAPPINGS

by CHARLES MRAZ

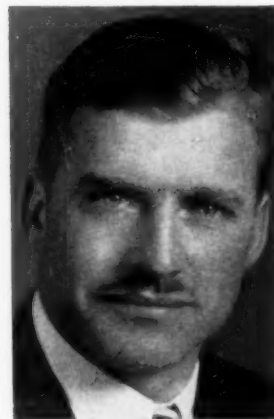
With the passing of another season, no doubt some beekeepers have been pressured into the packaging and sale of honey comb cappings by readers of "Folk Medicine" in an effort to relieve such conditions as sinus and other respiratory troubles. After getting into such a project, many no doubt have run into problems of one type or another, and it would indeed be helpful if these experiences were published for the mutual benefit of all involved.

One problem brought to my attention is that the cappings darken with age so they are not attractive late in the season. No doubt there may be some darkening of cappings in storage, but we have not noticed it over a period of a year. Our cappings are dark to begin with and any further darkening would be slight and not noticeable. It is possible there is a difference in cappings in this respect. Our cappings come from a Boganschutz type uncapping machine and like coarse sawdust. These are spin dried and packed in one pound honey jars. After spin drying, they actually contain perhaps 50% honey but seem rather dry. Our cappings come from regular extracting combs

that are usually all sealed before extracting so they are often covered with some propolis.

Since we do not know what the effective factor is in cappings, it would be well to include propolis and pollen such as found when the combs are sealed and stay on the hives for awhile. Some years ago, the Beekeeping Laboratory in Beltsville, under Jim Hambleton, found that propolis had an inhibitory effect on tuberculosis bacillus. In 1948, Dr. William Robinson, Dept. of Agriculture at Beltsville, found that just 1 part pollen in 10,000 parts of food, had an anti-carcinogenic effect on mammary tumors in mice. Often it takes just a small amount of these materials to produce profound effects.

If all types of cappings, pollen, and propolis from different parts of the country will work the same way is a big question. I remember some years ago a man in California claimed great relief in the use of cappings from us, with his sinus condition. I suggested he get some cappings from a California beekeeper which he did. He then wrote to say he couldn't use the cappings he got locally because they made his mouth sore to chew



them. In this one case, at least, there was a difference in the cappings from Vermont and California. What about the differences in cappings from other parts of the US where pollen, propolis, and nectar sources are from entirely different type plants? It would be interesting to know about these matters so we could get a better picture of just what the use of cappings will or will not do.

In this area at least, many people get dramatic relief with the use of cappings and as far as I can determine, its effect does not wear off and its use is completely harmless. Those who can check people using cappings, it would be interesting to follow thru

the history over a long period of time, to see what does happen. So many variables are involved in any therapeutic effects, it is difficult to make any solid conclusions. People vary greatly, their diseases or complications vary, the cappings vary, along with the mental attitudes of everyone involved.

All too often in matters of this kind, any benefits are considered to

be only psychological. Whether the benefits are mental, physical, or metabolic, the important consideration is—Does it help. If it does, cappings should be used to their utmost to give relief to those people who cannot get it by any other therapeutic treatments. There is certainly no treatment for these respiratory troubles any safer or cheaper than cappings. Vermont

## SAVE TIME WITH A TACKER

by MILTON H. STRICKER

"Maybe I wouldn't have bought it if I hadn't had an air compressor," says E. A. Fisher, of Watchung, N. J.

But after one year of use, "Ned" knows now that the air operated tacker is worth buying an air compressor for. He uses it for all beehive repairs, assembling the metal on metal covers, assembling escape boards, and putting the wire on moving screens, since he is in the pollination business.

Being air driven, it has great penetrating power and is so much easier and quicker than a hand operated machine. It will drive wide crown  $\frac{1}{2}$  inch and  $\frac{9}{16}$  inch heavy staples. Special attachments can be bought such as a screen stretcher claw that pulls screen wire tight on the frame while making moving screens.

Ned favors the "Duo-Fast" but there are several other tackers on

the market and all companies have many models. It would be best for each beekeeper to select the model or brand that suits him best.

This season Ned anticipates using a CO<sub>2</sub> cartridge with his tacker to staple his moving screens in his out-yards. Of course, in the shop he attaches it direct to the tank of his own compressor. He says it needs only a small homemade air compressor, one that will generate at least 50 pounds.

"Altogether it is the best tool I ever bought for the bee business, and you can quote me," says Ned Fisher.

New Jersey

## ADAPTATION

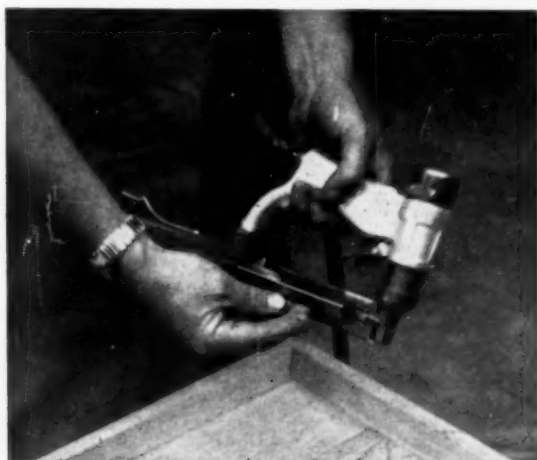
by BRUCE M. SMITH

It isn't everyday that a beekeeper can work a yard of bees then check a farmer's fields for insects and possibly turn in a recommendation to spray all in one day. Especially when that field happens to be located right next to the yard of bees. Strange as it may seem, working for an insecticide company actually paid off. A statement to the farmer concerning the need to spray somehow carried weight, especially when it came from a beekeeper. In turn, I found some locations that could never have been spotted unless one had tramped every yard of the farmer's property.

Most farmers will go to all kinds of trouble to keep from killing bees, and will even do more than the law requires for the protection of the beekeeper. The selling and application of insecticides is a highly competitive business so the farmer and beekeeper sometimes get lost in the rush to make money.

Beekeeping has undergone as much change as any type of farming in the past ten years. Unless the beekeeper can change with the times he will probably fail, for those who can adapt themselves the future can be bright, even though it may be as different from the beekeeping practiced twenty years ago as day is from night.

California



The tacker is air driven and has great penetrating power.

Nailing up hive cover with power tacker, a quick and easy job.





# The Sideline Producer

FLASHBACK . . .

## Those Were The Days

Remember when it was customary for a son or daughter of the part-time beekeeper's family to watch the bees? This watchfulness was evidenced particularly when it was time for the bees to swarm. If a swarm issued, a call was put in for dad and a large spoon was pounded on a dishpan with the hope that the swarm would settle at a low level and surprisingly a good many of them did. Then it wasn't difficult to start up the garden hose and give these wayward bees a good sprinkling with water. When dad got home he would gather up the harvest and put the bees in a hive on a set of combs

and away we'd go with another addition to our bee yard.

Of course the bee yard was practically always in the back yard of the home in town or on the farm. If there was a lot of other necessary work that would interfere with taking care of the bees they just didn't get taken care of. Supers were perhaps put on too late; bees were not requeened. They requeened themselves by supersedure. There was no opportunity to make up losses because there were no package bees in those days. Keeping up the numbers of colonies in a bee yard was a matter of making divisions and raising your own queens. Of course the home

grown queen was always chosen from a mother that produced the very best crops but there was no control of mating so queens might be good or bad but the process, as Dr. Miller said, of "breeding from the best" wasn't too bad. It was better than doing nothing.

Then too often the honey was supposed to be comb honey. It was in reality a poor quality of comb honey, sort of nondescript, what we would now call cull sections. But that's all we knew so it seemed like pretty good honey. It was traded in at stores for what—sugar, coffee, flour, whatever was needed. Seemed like a pretty good occupation.

## PREPARING BEESWAX FOR MARKET

by FRANK CANTRELL

The beginner is beset by many perplexities in his experience in beekeeping, one of them being the transformation of scrap wax and brood comb into salable form.

All the beekeepers that I have known, dump their wax into a drum or pot of boiling water and dip off the molten wax, pouring it into a vessel to congeal. This works very well on cappings and clean comb but when melting scrap wax and brood comb there is a great deal of good wax left in the pot with the silt and cocoons, not to mention the time, labor, and fuel consumed.

This year we built an experimental solar wax melter—fifteen by thirty inches, with removable tray for easy cleaning.

Melting wax from our 1957 crop in the solar wax melter was a pleasure in contrast to other methods used in the past. One filling of the tray with cappings that have drained in a wire basket overnight runs through the solar melter on a clear sunny day during the summer. Wax, being lighter than honey, floats on top when honey and wax run into the wax receiver. When the wax is congealed it is lifted out of the receiver and the somewhat heavy honey is

bottled for home use. From one run of cappings we get between three and four pounds of honey and two or three pounds of clean yellow wax.

Recently we removed a colony of bees from a garage of a friend. After fitting six brood frames with brood and adhering bees, we removed the remainder of the bees as we came to them with a special vacuum cleaner rig developed by us in our hobby shop. We then filled five large buckets with the remaining comb, honey and brood comb. For the next five days one bucketful per day was loaded into the solar melter, honey and all, which ran through in one day. At the end of five days we had fifty pounds of dark honey that we will feed back to the bees this fall for winter stores. We also had one cake of wax for each day's run, which was clean and of a bright orange color. We re-ran this wax through the solar melter on the sixth day and it totaled seven and one-half pounds. All of the silt and cocoons from the brood comb remained in the tray of the solar melter, retarded by a piece of screen wire placed across the lower end of the tray.

The solar wax melter is brought

to our attention from time to time in bee books and magazines but passed up by most of us as being too simple to be effective or efficient.

The August meeting of our Bee Club was an open air or out-of-doors affair. We displayed the solar wax melter in operation and it was viewed with enthusiasm by all members present. At our September meeting, the solar melter was spoken of by our president, ending with this statement: "I will never boil water again to melt beeswax." Several members asked for plans and specifications for building the solar melter. One member marketed a small amount of wax this past week which was melted by placing a pan of wax in a brood chamber with a piece of glass on top.

The SOLAR WAX MELTER really works and does a nice clean job, little work, no watching, no fire, no water, no scalds, no burns, no straining, no mess and you turn out a nice, clean cake of wax ready for the market in one operation. Load the solar melter one morning and unload it the next morning and load it again.

Give yourself a break by giving the solar melter a chance to melt your wax while you are occupied elsewhere. If you are not handy with



Cantrell wax melter with wax pan, receiving dishes and glass top. Melter is made to slant to the front.



Melter with top glass removed to show wax pan and support and wax receiving dishes.

the saw and hammer there is a solar melter on the market for about twelve dollars and fifty cents—less glass, which is less than the cost of labor and fuel for melting one year's crop of wax for the beginner or small beekeeper.

Success with the experimental solar wax melter led us to build a larger and more efficient product along conventional lines. This model has double walls and bottom two inches thick

for holding heat. The outside is made of galvanized iron painted black to absorb heat better, and lined inside with sheet aluminum to reflect additional heat to wax melting pan which is three inches deep. Melting pan is removable for easy cleaning, the top edge of pan is rolled around a five-sixteenth rod for additional strength and all corners are folded like the old baking pan making it wax tight without soldering or welding.

The vertical front section has an adjustable shelf to accommodate various depth wax receiving pans. The screened output lip of the melting pan is shaped so as to divide the molten wax into two streams, to be able to fill two small wax receiving pans at the same time. Top and front are of glass.

Georgia

## WAS IT INHERITANCE?

by ERNEST ONLIKER

My brother-in-law found a bee tree that the loggers had felled and left lying on the ground. When we went to hive them I took 2 or 3 empty frames along to put brood in, but they didn't have much brood and only enough honey to grease a couple of hot cakes. I noticed some capped-over queen cells in the brood but I didn't pay much attention to them. I leaned some of the brood next to the sidewall of the hive temporarily so I thought I could hive them better, but most of the bees wouldn't go in the hive. The next evening I tried to smoke them into the hive but without success. (This was in May or June.) They stayed clustered on the bottom of the log for 2 or 3 days.

The next Saturday I went up there about 12 o'clock and the sun was shining warm and I scraped off what bees I could and put them in front of the hive and then gave the rest a good shot of smoke. They all swarmed into the air. After awhile I

saw a little cluster of bees close to the ground. There was the queen, so I took her by the wings and put her in front of the hive. She went in and soon the best of the bees went into the hive. After awhile I noticed the bees were fighting even on the outside and in the air. After a bit the bees brought a dead young queen out of the hive. I took the hive home that evening. In about a week or so they started queen cells so I cut them out and sent for a queen. When she came I killed the old queen and cut out all the queen cells, and put the young queen in a Chantry queen cage I bought from Jay Smith about 20 years ago.

The next morning the bees were dragging dead bees out of the hive, there was a civil war going on. I looked them over the next week, they had accepted the queen okay.

The next year they started queen cells again, so I sent for another queen and when she came, I killed

the old queen, cut out the queen cells and introduced the young queen the same way I did before. There was a civil war all over again, this time they killed the young queen.

I think this proves that the young bees inherit characteristics from the old bees.

Oregon

## Go Visiting

Why not put down that paint brush or hammer and go visiting? During the winter months repairing equipment takes up considerable time and it can get awfully monotonous. If a person would just take a day for a little visiting it might not only improve one's spirits but it might pay off financially. Working by one's self too long can soon develop a "my way is the only way attitude." Visit with other beekeepers. If you are invited into their shop you may soon be swapping ideas that will save both of you considerable time.

Bruce M. Smith  
California



**Editor - W. W. Clarke, Jr.**  
204 Agricultural Education Building  
Pennsylvania State University  
University Park, Penn.

# The Beginner and Novice

•Question from—  
**Harvey Chase**  
Gibson City, Ill.

Moths got a start in one of my colonies and they have ruined quite a bit of the comb and honey with their webs and larvae. Since much of the comb and honey is still good is there some way of eliminating the moths and saving the colony? Or should everything be burned to prevent the moths from infesting my other two colonies? Is there any way to prevent moths from getting started?

*Answer:*

There is only one way to prevent an infestation of wax moth in your bees and that is to have them strong enough to fill the hive and be able to repel the wax moth. I have never heard of a strong colony, headed by a good queen, being destroyed by wax moth.

Any stored combs or infested combs may be fumigated with paradichlorobenzene, sulfur fumes, Cyanogas, carbon disulfide, or some other fumigant to destroy the larvae which do the damage. It may be necessary to repeat the treatment if the weather is warm.

Nothing is to be gained by destroying the colony since wax moth are very common, almost universal. You certainly should clean up the mess and build strong colonies so they can destroy any larvae which may develop.

If the colony is being destroyed by wax moth, check to see that the colony is queen right, make them strong by uniting or adding bees; but first, remove any bad combs to give the bees a break. You cannot treat the colony with a fumigant if bees are present.

•Question from—  
**Donald Bachmann**  
Wood, South Dakota

My question is about wintering bees in a cellar. It gets very cold here in South Dakota. In July ABJ I read where Charles Miles, Glenwood, Minnesota, winters his bees in a cellar. I would like to try it.

Do the bees have to be able to go outside or could I keep the cellar closed and dark all winter? The bees should be there from Dec. 1 to March 1 to get away from below zero weather. Also could I feed sugar or sugar water to colonies low in stores over these winter months? Will they take it?

*Answer:*

I believe there are a few beekeepers who practice cellar wintering, but none of them live in Pennsylvania. Several beekeepers here have tried cellar wintering with little success but, of course, our winters are not as cold as those in South Dakota. There are some advantages to indoor wintering, providing the temperature and humidity can be controlled within rather close limits. Bees will use less stores and the equipment should last longer under such conditions.

Some of the disadvantages are:

(1) It is generally agreed that bees wintered outdoors come through the winter in better shape and build up better in the spring than those indoors, (2) it is difficult to control the temperature and humidity, (3) the cost of a cellar properly constructed would be very high, (4) the labor involved is high.

To answer your questions, the bees do not get a flight once they are in the cellar. I do not think feeding is done, although it is likely that bees would take food under such conditions.

Personally, I think I would stay away from cellar wintering and, if the weather is extreme, I would either wrap the hives with waterproof paper or pack them. Give them a windbreak and plenty of food.

It may be of interest to you to know there is practically no packing done

in this section, even though the temperature may drop lower than -10° F. The temperature does not stay below zero for very long, as a rule. Bees winter well here, providing there is sufficient food (over 60 pounds per colony) and the colony is of sufficient strength to have a good-sized cluster.

•Question from—  
**Mrs. Willie Lee Whiteley**  
Siloam Springs, Arkansas

In spring I ordered a hive and a package of bees with queen. Before they arrived I was in the hospital with a broken back but a neighbor who has bees, set ours up for us and showed my husband how to care for them. While I have been recuperating I have read and studied ABJ and other literature trying to become a literate beekeeper.

I became interested in an observation hive. My husband is a carpenter so I thought if he would make one I could study the bees and learn quite a bit about them by the time I was able to go out to the colony. He was not too interested until I obtained directions for making one from a college. Now the observation hive is done but still empty. Can I use it this winter? My friend who helped me says I must wait until spring. If not, what must I do? I am still pretty green.

*Answer:*

Yes, you can use your observation hive in the house this winter. You should place the hive so the bees have an outside entrance. You must also supply them with food. Your main problem is getting the bees and queen at this time of year. A small package (about 1 pound) with a queen would do the job. Better still, a weak colony of bees, or one frame of bees and the queen may be used.

Pollen, sugar syrup, or honey, and water are needed if the colony is to continue to grow.

We have two or three observation hives in operation at the University and there are many schools which observe them the year round.

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# Science in Apiculture

## Newest Achievement

In The Study Of The

## "LANGUAGES OF BEES"

by E. E. LEPPIK,

Iowa State University, Ames, Iowa

Dr. Martin Lindauer, Professor at the University of Munich, Germany, delivered recently a series of highly stimulating lectures on the newest achievements in the study of the "languages" of bees. In this connection it is appropriate to recall a similar lecture tour of Professor Karl von Frisch in the United States ten years ago. Dr. von Frisch, now 73, demonstrated one of the most sensational discoveries in the field of animal behavior, the "dance language" of the honey bee (see Amer. Bee Journ. 1953: 434-435, 470-471). Although this discovery helped to unveil some profound mysteries in the social life and behavior of honey bees, it also stirred up many new problems and enigmas for both beekeepers and biologists.

The next question that arose was whether all races and all species of honey bees possess the same technique of communication, so that an American bee, for instance, could make itself understandable to its fellow bees that live in Europe or in India. Or are bees restricted in their communication by similar "national" barriers, as are the human races? Dr. Lindauer answered this question by studying the "languages" of many races and species of honey bees in several parts of the world.

Dr. Martin Lindauer, born December 19, 1918, in Kohlgrub, Bavaria, was a student and former assistant of von Frisch in Graz (1948-1950) and Munich (1950-1958). As a Fellow of the Rockefeller Foundation he worked six months in 1954 in East India and Ceylon, studying the "languages" of Indian bees. He also spent six months in 1956 in Brazil, experimenting with stingless wild bees (*Trigona*, *Scaptotrigona* and *Melipona*). After retirement of Professor von Frisch in 1958, Dr. Lindauer was appointed to teach zoology at the University of Munich to continue the research work of his teacher on the behavior of bees.

### Different Languages of Indian Honey Bees

It is generally accepted that the mountainous area of East India might have been the ancestral home of honey bees of the genus *Apis*. There are three indigenous species living in that area, the Giant honey bee or Bombara (*Apis dorsata*), Eastern honey bee (*Apis indica*), and Little honey bee (*Apis florea*). Only a single species (*Apis mellifera*) lives now in Europe and is possibly native in the northern part of Africa. No native representatives of this genus are found in the New World, except the



domesticated races of *Apis mellifera* introduced by man. It has been, therefore, a most exciting task to Dr. Lindauer to study the Indian bees in respect to their "linguistic" capabilities. He found that in spite of the common principles in the communication systems of all honey bees, the "language" of each species differ from all others. It is true that the round- and tailwagging dances are performed by all species to indicate the distance and direction to food plants. Yet the Indian bees indicate the direction by dancing on an open platform on top of the nest, while the European and Eastern bees perform their gyrations on a vertical comb in a dark hive. The more advanced European honey bees, which dance inside of hives, are capable of indicating the direction in relation to the gravity line, which corresponds to the position of the sun outside the hive. This is, of course, a very special technique unknown to the Giant and Little bees. The latter perform their dances in the open and therefore do not need the sun for indicating direction. They simply point with their head during the dancing gyrations towards the site of food.

One might assume, therefore, that all present "languages" of the four species of honey bees may have had the same source of origin in some ancestral bee stock which lived in tropical Asia sometime during the Cretaceous Period. Later on, when this stock expanded itself to the whole Eurasian continent and started to split into various groups, the original "mother tongue" must have differentiated into the different "language



### Science Editor—

DR. WALTER ROTHENBUHLER

IOWA STATE UNIVERSITY  
AMES, IOWA

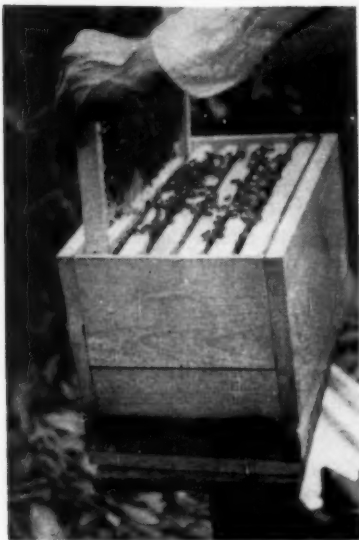


FIGURE 2—The Eastern (Indian) honey bee, *APIS INDICA*, builds several combs in a hollow tree. It may be kept also in an artificial hive.



FIGURE 3—The little honey bee, *APIS FLOREA*, lives in single comb nests on the branches of trees.

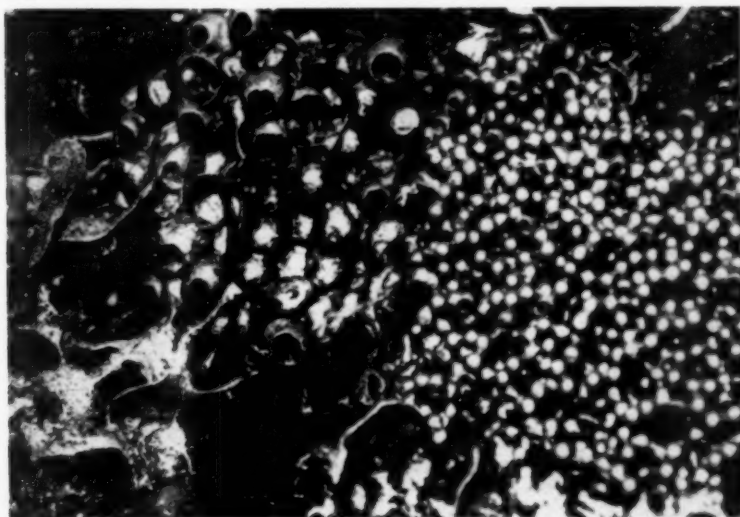


FIGURE 4—Irregular nest of the stingless wild bee, *TRIGONA IRIDIPENNIS*, in Brazil.

groups" of recent species. A similar trend of development is seen in the "dialects" of present races of the European honey bee, *Apis mellifera*. For instance, the same dance movements have somewhat different meaning for the Italian race than they have for the Austrian bees.

#### Racial Differences in the Dances of the European Honey Bee

Dr. R. Boch, of Munich, made a comparative study of the six races of Western honey bee, *Apis mellifera*. When the feeding place was close to the hive, all races performed round dances without indication of direction

or distance. But as soon as the feeding place was moved gradually from the hive, sickle and tail-wagging dances appeared. By these dances, proper distances are indicated in different ways by different races. German bees (*Apis mellifera* var. *mellifera*) performed distinct sickle dances for the distance of 60-85 feet and waggle dances beyond 200 feet. The intermittent race (*A. m. intermissa*) behaved very similarly to the German bees, except that its sickle dances began somewhat earlier. The Carniolan (Austrian) bees (*A. m. carnica*) performed no sickle dances, but changed their dancing gyrations

gradually from the round dance to the waggle dance when the feeding place was moved beyond 50 feet. The Caucasian (*A. m. caucasica*) and Italian (*A. m. ligustica*) races behaved similarly in the case of long distances over 100 feet, but differed from one another in the performing of sickle dances. Egyptian bees (*A. m. fasciata*) danced round dances when the feeding place was less than 8 feet from the hive, sickle dances to indicate the distances of 12-15 feet, and waggle dances beyond 40 feet. In mixed colonies, which contained bees of different races, these differences in dances led to the misinterpretation of the distance of the feeding place.

#### Bees Do Not "Take a Joke"

Dr. Lindauer impressively entertained his audience in explaining the following experiment. The Italian bees, if introduced into an Austrian hive, indicated in their "dialect" the distance of 330 feet to the food. But the Austrian bees, misinterpreting the Italian "slang," flew 400 feet and did not find it. So a listener asked, "What did the disappointed Austrian bee tell the 'damned' Italian, after returning to the hive? Do bees scold or swear when they get mad?"

As a matter of fact, bees do not use any "empty phrases" or other kind of adversive arguments in their "language." Nevertheless they can transmit exact messages to one another as well as is possible in any human language.

#### Tropical Wild Bees

The stingless wild bees of the genera *Melipona*, *Trigona* and *Scaptotrigona* have an even more primitive way of communication. Dr. Lindauer studied them in Brazil. The elementary dances of these bees indicate neither direction nor distance, but induce fellow bees to follow the dancers to the food source. After dance performances, these bees fly in small flocks guided by scout bees directly to the food.

In addition, these bees have developed an odor-trailing technique, which can lead the whole colony to some particularly rich source of food. Having very large odor glands, these bees can lay down an odor trail on plants, trees, stones, and other objects, which guides the foragers to the food. Such an odor trail, marked with numerous points on grasses and stones is pictured in Fig. 4.

This remarkable ability of tropical  
(Turn the page, Please)

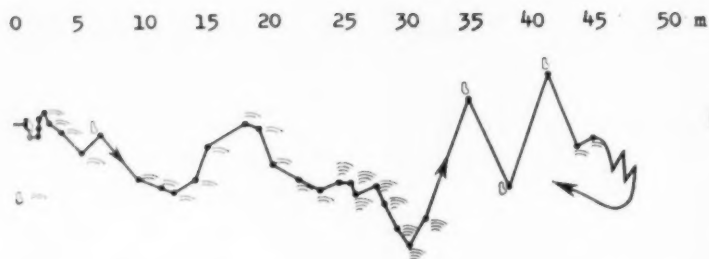


FIGURE 5—The odor-trail of wildbees is laid on grasses and stones from feeding place (a) back to the nest a distance of 50 meters.

bees stimulated Dr. Lindauer to further experiments. First, he separated the feeding place from the nest by a small lake. Scouts were able to locate the new place, but were unable to lay down an odor trail across the water. When the forager bees still did not appear at the feeding place, a rope was strung across the lake on which many branches and plant leaves had been hung. After that, scout bees began to lay down the odor trail on the rope and soon the whole colony was seen on the feeding place.

#### *Bees' Dances Can Be Photographed In Fluorescent Light*

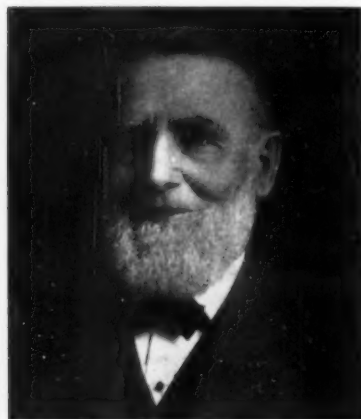
Bees' dances are commonly studied by direct observations or according to photographic films taken in hives. Wolfgang Wittkindt, of the University of Bonn, developed a new method which helps study complicated movements of bees during their dancing performances. He marked bees with fluorescent color on their backs and photographed by ultraviolet light their dancing gyrations, as pictured in Fig. 5.

#### *Experiments With Artificial Bees*

Dr. W. Steche, of the Apicultural Research Institute at Bonn, Germany, constructed an artificial bee and connected it with a special oscillating mechanism. In this way he could imitate dancing gyrations and attract foragers to follow the artificial bee. Dr. Steche finally succeeded in directing bees from the hive at various angles and definite distances to locate the dish with sugar syrup. Further development of this method could enable beekeepers to deliver messages to the bees and to send them to the plants they want to be pollinated.

<sup>1</sup>Dr. Martin Lindauer, accepting the invitation of Dr. W. Rothenbuhler, lectured about the above mentioned topic at the Iowa State University in Ames on May 5, 1959. A large audience attentively followed the fascinating stories about "speaking" and "dancing" bees.

The writer is indebted to Dr. Lindauer for his original photos used in this paper.



DR. C. C. MILLER

## DR. MILLER'S ANSWERS

For some more history, our long-time readers will remember that Dr. Miller, the Sage of Marengo (Ill.) and world's champion comb honey producer, answered questions in the Journal for many years. We reproduce some of his answers, good today. This time they are taken from ABJ for October 1912.

could add more water to it before throwing it away, so as to make the sweetness very slight, and then if each time you throw it on a new place on the ground, I think you will have no trouble. The reason for extreme caution in the matter is the fear that there might be foul brood in the honey. You might make a sure thing of it by having a pit dug, into which you would throw the washings, and have the pit covered well.

where the "worms," as the larvae of the moth are called, are pretty bad, you may do a little to help. You will see the gallery of the miscreant running along the surface of the comb. Take a pin or a wire nail and prick into one end of the gallery. Then prick into the other end and tear open the gallery and thus drive the worm toward the other end, where he will come out, and you can dispatch him. Don't allow pieces of comb or combs in hives without bees to be lying around as breeding places for the moth.

#### Disposing of Capping Washings

1. Is there any chemical or other article which can be mixed with the washings of wax or cappings to be thrown out that will not attract the bees?

. How can I dispose of water which is a little sweet so as not to have the bees bother? *Ohio*

*Answer*—1. Carbolic acid would, no doubt, be effective.

2. I have never paid any attention to it, for if it is thrown into a drain or upon the ground it is so diluted that it disappears before the bees pay any attention to it. If you find the bees trouble in that way, you

#### How to Keep Moth Out

How can I clear a colony of bees of moth and then keep them out? *California*

*Answer*—Prevention is better than cure. The best preventive is a big lot of bees in the hive. Italians are better than blacks to keep moth at bay, and if your bees are very much inclined to black, you will do well to introduce Italian blood. Even a weak colony of Italians will keep down the moth. A queenless colony is likely to be troubled by the moth. With strong colonies of Italians and no queenless colonies you can whistle at the moth. But if you have a colony

#### Handling Caucasian Bees

I desire to make inquiry to the best method of handling Caucasian bees in New York State. I have read in the American Bee Journal that they will fill up as much as 10 frames in a hive-body with brood. In this case, how would you manage this in the spring? In the fall would you advise wintering them in one or two stories? *New York*

*Answer*—The probability is that you will find that Caucasians need no treatment different from other

bees. You will find bees other than Caucasians that will keep 10 frames filled with brood and you are not likely to find that all Caucasians will do it. A colony that will keep more than one story filled with brood early in the season, whether Caucasian or any other, should have a second story given unless you want to draw brood from it to give to weaker colonies. Then when harvest time comes it should be reduced to one story, any surplus frames of brood to be distributed where they will do the most good.

In the fall you will likely find that of their own accord they will reduce the brood nest so that one story will satisfy them.

#### Honey from Cappings as Feed — Dark and Light Cappings

1. Is the honey left in the cappings good feed for the bees after it is heated in the solar wax-extractor? Will it cause dysentery?

2. Why is an old, dark comb always sealed dark when the one at the side, if new or light, will be sealed light?

I think a great deal of your columns in the American Bee Journal.

Iowa

*Answer.*—1. Yes, unless heated so as to be actually burned—a thing not likely to happen—it ought to be wholesome food for them.

2. You will find that not only is the dark comb sealed dark, but the light comb beside it is likely to have its sealing darkened to some extent. Years ago I used wide frames for sections, the wide frames holding 8 sections, so that they were the same size as brood frames. As a bait to induce the bees to begin work promptly in the super, I practiced taking a frame of brood from the brood-chamber and putting it in the super, a frame of sections facing it on each side. It was effective in starting work promptly in the sections, but if at any time I left it until the bees began to seal the sections they were sure to seal them dark. The explanation is that the bees are in the habit of carrying bits from the old combs to help in the sealing. That explains why it is best to have sections at some little distance above the top-bars. You will find that sections built over top-bars  $\frac{3}{4}$  inch thick will be darker than if built over top-bars  $\frac{1}{2}$  thick.

#### "Slaughter of the Innocents"

Why do some of my colonies throw out a lot of young bees in all stages

of development, some dead and some alive? Yesterday I could have picked up a handful in front of a hive belonging to a neighbor. Why should they "slaughter the innocents?" The writer has much more enthusiasm than experience in bee-culture, but finds it very interesting, your department of the American Bee Journal especially so.

Iowa

*Answer.*—"The slaughter of the innocents" no doubt occurred because the innocents were "no account" innocents; that is, they were drones. When the harvest is over, or when there comes a serious break in the harvest, the bees seem to conclude that they can hardly afford to support a lot of gentry who do nothing to earn their own livelihood, so the poor drones have to go. It is common to say that at such times the workers kill the drones, stinging them to death. I think such an opinion is the result of superficial observation. I never saw a worker sting a drone. It is possible that such a thing may happen, but I think it must be a very rare occurrence. Many, many times I have seen workers driving drones, seeming to be biting them and trying to sting them; but it appeared rather that they were pretending to sting. When one worker stings another you do not need to watch very long before you see the stung worker curl up and die. I never saw a drone have this appearance after a worker had pretended to sting it. If I am rightly informed the workers, aside from teasing and driving the drones, merely withhold food from them, and they die. For a drone cannot, like the workers, live by helping itself to the stores in the cells, but must be fed partly digested food by the workers.

It is possible that you may say that there was no failure of the harvest. Well, sometimes it happens that individual colonies do not wait for the general slaughter, as it is called. After a colony has swarmed, the old queen having gone off with the swarm, the young queen in the mother colony becomes fertilized ready for laying. After this there is no further need of drones for the current season, and they meet their fate.

Whether the driving out of the drones occurs at one time or another, not only does the colony become rid of the flying drones, but all drone-brood is destroyed by the workers.

You will do well to prevent the rearing of these drones in all but a few of your best colonies. Even one colony in a hundred will rear enough drones to do for the whole apiary. If

there is no drone-comb in a hive, there will be no drones. You can cut out any drone-comb and put in its place patches of worker-comb or of worker foundation. Some, however, think it is well to satisfy the bees to the extent of leaving them one or two square inches of drone-comb. You can behead these drones in the comb after they are sealed over, or sprinkle a little salt on them before they are sealed.

#### Allen's System of Swarm Prevention

Will you please explain Mr. Allen's system of swarm prevention, as he says in the August number of the American Bee Journal for 1912, that he gave it to the readers of the Bee Journal two years ago. If it really has any merit, will you kindly reproduce it in the journal.

Canada

*Answer.*—If you will turn to page 94 of the American Bee Journal for 1910, you will find the plan as given by A. C. Allen, which is as follows:

"When the honey-flow is well started I go to each strong colony, regardless of whether the bees desire to swarm or not, and remove it from its stand, putting in its place a hive filled with empty combs, less one of the center ones. Next, a comb containing a patch of unsealed brood about as large as the hand, is selected from the colony, and placed in the vacant place in the new hive; a queen-excluder is put on this lower story, and above this a super of empty combs, this one having an escape hole for drones; and, on top of all, an empty super. A cloth is then nicely placed in front of this new hive, on which the bees and queen are shaken from the combs of the parent hive, and the third story is filled with the combs of sealed brood and brood too old to produce queens, and allowed to remain there and hatch, returning to the working force."

This is really the Demaree plan, which was given to the public many years ago, by G. W. Demaree, a prominent Kentucky bee-keeper at that time. Mr. Allen has varied it by putting a frame with some brood in the lower story, whereas I think Mr. Demaree had only empty combs or combs with starters in the lower story. Mr. Allen's variation is of value, for I think there were cases reported in which the bees swarmed out with no brood in the lower story. Mr. Demaree put all the brood in the second story, while Mr. Allen puts it in the third. I don't know which is better.



# The Federation

Secretary Joseph O. Moffett  
115 So. College Ave., Fort Collins, Colorado



This is the time when we lay our plans for another year. The past year is reviewed to help us in this planning. Some of the aims and plans of your Federation follow.

**Enabling act.** Much has been said for and against an enabling act. What we will do on this important issue will be decided at the Phoenix convention. Concerning this act, one state president said, "Let's not close the door on something that could be of value to us. There are some things that we could use to advantage in a marketing order. We can leave the rest out of the order."

**Queen program.** We are finishing the first year during which we had a bonafide honey queen. Much publicity was obtained for honey by our

first queen, Kay Seidelman, of Ionia, Michigan. The second queen will be chosen at Phoenix. With the experiences of the first year behind us, we should obtain even better results in 1960.

**Group Insurance can save us money.** Two bids on group life insurance have been received. They will be accepted or rejected at Phoenix. Another company is considering blanket bids on business and personal liability. Other plans will be considered in 1960 which can save our members money.

**Continue Home Economists booth, National Honey Show.** Activities that have been successful will be continued in the future. The honey booth at the American Home Economists

Convention will be continued. This booth presents honey to the professional group which has a large influence on our eating habits.

Likewise, the National Honey Show will be continued. This show exhibits honey to thousands of fair patrons.

**Phoenix convention will determine many policies.** Many of our policies during the coming year will be determined at the Phoenix convention. Attend if you can and let us know your wishes concerning Federation policy.

**1960 members needed.**

Start the new year right. Join your growing Federation and help your industry grow. See you at Phoenix.

## QUEENS PACKAGE BEES QUEENS

Dadant's Starline Queens and Bees - Finest for honey production and very gentle to work with. A bee you will be proud to own.

PACKAGE BEES AND QUEEN		QUEENS	
		1 to 25	\$1.75
2 lb. pkg. & Q.	\$4.80	25 to 100	1.65
3 lb. pkg. & Q.	6.00	100 to	1.55
4 lb. pkg. & Q.	7.20		
5 lb. pkg. & Q.	8.40		

For our regular stock queens and bees deduct 30c per queen or package. For P.P. Packages add \$1.40 per package. Package bees ready after March 1.

Queens ready any time after Jan. 1.  
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QUEENS—\$1.45 each Air Mail  
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Reference: First National Bank, Moultrie, Ga.

Above ad from The American Bee Journal: November, 1923

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## STARLINE HYBRID QUEENS

Breeding is done only from artificially inseminated queens. Over 400 colonies headed by the proper drone mothers surround our mating area for a distance of eight miles in all directions, insuring the purest possible mating. Only the best queen-rearing conditions will produce quality queens. Write for prices and information on hybrids.



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**Mahira, Georgia**

"Where Satisfaction Is a Certainty"  
SHIPPERS SINCE 1919



## Happy New Year

*May 1960 bring you prosperity.*

We are ready and willing to help by supplying

## Package Bees

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### 1960 PRICES:

	1-24	25-99	100 up
2 lb. w/reg. queen	\$4.50	\$4.25	\$4.00
3 lb. w/deg. queen	5.70	5.45	5.20

For Island Hybrid queens add 30c each

Queens clipped unless otherwise ordered.

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**SUCCESSFUL NEW YEAR**

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# Meetings and Events

## 17th Annual Convention AMERICAN BEEKEEPING FEDERATION, INC. HOTEL WESTWARD HO — PHOENIX, ARIZONA JANUARY 13-15, 1960

### MONDAY, January 11

8:30 a.m.—  
Apiary Inspectors of America (all day)—Turquoise Room  
9:00 a.m.—  
American Beekeeping Federation Executive Committee—Desert Room  
1:00 p.m.—  
Royal Jelly Research Foundation—Rose Room

### TUESDAY, January 12

8:30 a.m.—  
Apiary Inspectors of America—Corral Room (3d floor)  
9:30 a.m.—  
American Beekeeping Federation Board of Directors—Aluminum Room  
9:30 a.m.—  
American Honey Institute Board of Directors—Rose Room  
1:00 p.m.—  
REGISTRATION—Turquoise Room  
1:00 p.m.—  
Joint Meeting American Beekeeping Federation Research Committee and American Committee of the Bee Research Association—Corral Room (3d floor)  
1:30 p.m.—  
Directors, National Honey Packers and Dealers Ass'n.—Desert Room  
7:30 p.m.—  
Honey Industry Council—Desert Room

### WEDNESDAY, January 13

#### REGISTRATION ALL DAY Turquoise Room

9:45 a.m.—Call to order  
Presentation of Colors  
Invocation  
Film—The Grand Canyon State Greetings from Phoenix, Mayor Samuel Mardian, Jr.  
Response—Henry Hansen, Dakota City, Iowa, Vice-President, American Beekeeping Federation  
10:15 a.m.—  
President's Address—Lawrence Budge, Malad, Idaho  
10:45 a.m.—  
Dr. Harold Myers, Dean, College of Agriculture, University of Arizona, Tucson

11:15 a.m.—  
Dr. J. W. Pou, Extension Director, College of Agriculture, University of Arizona, Tucson  
1:00 p.m.—Film

#### APICULTURAL RESEARCH, Jas. I. Hambleton, Brookeville, Maryland, presiding

1:30 p.m.—  
Federal-State Research in Apiculture, L. A. Carruth, Head, Department of Entomology, University of Arizona, Tucson  
1:50 p.m.—

#### Biochemical Research on Honey and Pollen A. R. Kemmerer, Head, Department of Agricultural Biochemistry, University of Arizona, Tucson, assisted by

W. F. McCoughey, Biochemist, Department of Agricultural Biochemistry, University of Arizona, Tucson  
2:20 p.m.—

#### Research on Royal Jelly Gordon F. Townsend, Head, Department of Apiculture, Ontario Agricultural College, Guelph, Canada

2:50 p.m.—  
Engineering Research on Apiary Equipment  
T. E. Hienton, Chief, Farm Electrification Research Branch, Agricultural Engineering Research Division, U.S.D.A., Beltsville, Maryland, assisted by

C. D. Owens, Agricultural Engineer, Farm Electrification Research Branch, U.S.D.A., Tucson, Arizona, and  
B. F. Detroy, Agricultural Engineer, Farm Electrification Research Branch, U.S.D.A., Madison, Wisconsin  
3:20 p.m.—

#### How Honey Changes in Storage J. W. White, Jr., Head, Honey Investigations, Plant Products Laboratory, Eastern Utilization Research and Development Division, U.S.D.A., Philadelphia, Pennsylvania

3:40 p.m.—

#### The Use of Bees in the Production of Legume Seed and Further Need of Research in Insect Pollination J. Bernell Harlan, Member, Seed Research and Marketing Advisory Committee, U.S.D.A., Diversified Farming, Legume Seed Production and Beekeeping, Woodland, California

3:00 p.m.—

#### General meeting, Honey Packers and Dealers—Rose Room

4:00 p.m.—  
Bee Industries Association—Desert Room  
7:30 p.m.—

#### Hobbyist Program—Aluminum Room

7:30 p.m.—  
500 Club—Saratoga Room

### THURSDAY, January 14

#### Turquoise Room

#### REGISTRATION ALL DAY—9:30 a.m.—Film

#### APICULTURAL RESEARCH (continued)

C. L. Farrar, presiding, Head Section of Bee Culture, Field Crop Insects and Bee Culture Research Branch, Entomology Research Division, U.S.D.A., Madison, Wisconsin

The Section of Bee Culture, of the Entomology Research Division, U.S.D.A., scheduled a sectional conference immediately preceding the Convention. Opportunity is being taken of this arrangement to introduce most of the personnel of the Section who are engaged in bee research. The Convention will recognize that many of the bee culture personnel seldom are able to attend the annual meetings of the Federation. The Phoenix meeting offers a rare chance to introduce these workers individually and for each to give a brief account of his work.

10:00 a.m.—

#### S. E. Jones, Chief, Field Crop Insects and Bee Culture Research Branch, Beltsville, Maryland

A. S. Michael, in charge, Bee Culture Laboratory, Beltsville, Maryland  
Microbiology, Pesticides, Library

C. L. Farrar, Section Head, Bee Culture Laboratory, Madison, Wisconsin Production Management, Breeding and Testing, Nosema F. E. Moeller, D. F. Peer

Warren Whitcomb, Jr., in charge, Bee Culture Laboratory, Baton Rouge, La., Genetics, Bee Behavior, Nectar Sources, Wax Moth E. Oertel, Otto Mackensen, Wm. C. Roberts, Stephen Taber

Frank E. Todd, in charge, Bee Culture Laboratory, Tucson, Arizona Pollination, Pesticides, Bee Behavior, Nutrition S. E. McGregor, Alan Woodrow, L. H. Standifer

George E. Bohart, in charge, Logan, Utah and Laramie, Wyoming Bee Culture Laboratories Pollination, Wild Bees, Bee Behavior, Pesticides, Diseases J. D. Hitchcock, M. D. Levin, E. R. Jaycox, W. P. Nye

1:00 p.m.—Film

1:30 p.m.—

Claire Floyd, Chairman, American Beekeeping Federation Marketing Committee

1:50 p.m.—

Results of Agricultural Research Service Marketing Survey Fred Bauer, Marketing Research Consultant, California

2:10 p.m.—

Some of the Cans and Can'ts of Federal Marketing Orders  
S. R. Smith, Director, Fruit & Vegetable Division, U.S.D.A. Marketing Service, Washington, D.C.

2:40 p.m.—

Grapefruit Marketing—  
August Grunow, Manager, Arizona-California Grapefruit Advisory Board, Phoenix, Arizona

3:10 p.m.—

Disadvantages of Federal Marketing Orders  
Ken Bradshaw, President, Honey Packers & Dealers Association, Wendell, Idaho

Discussion—Audience Participation

7:00 p.m.—Banquet

Thunderbird Room

#### FRIDAY, January 15

9:30 a.m.—Film

10:00 a.m.—

Mrs. Harriet Grace, Director, American Honey Institute, Madison, Wisconsin

10:30 a.m.—

Honey Industry Council Report—  
Ken Bradshaw, Chairman, Wendell, Idaho

11:00 a.m.—Committee Reports

—First Reading of Resolutions

1:00 p.m.—Film

1:30 p.m.—Business Meeting, American Beekeeping Federation, Election of Officers

#### SATURDAY, January 16

8:30 a.m.—Honey Industry Council—  
Desert Room

10:00 a.m.—Board of Directors, American Beekeeping Federation—  
Saratoga Room

7:30 p.m.—Executive Committee, American Beekeeping Federation—  
Desert Room

The Ladies' Auxiliary of the American Beekeeping Federation will hold a Brunch Thursday, January 14, at 10:00 a.m.

#### Middlesex County (Mass.) Waltham, January 30

The first 1960 meeting of the Middlesex County Association will be 6:30 p.m. Saturday, January 30 at the Waltham Field Station.

At the third lecture of the beginners' course in Beekeeping, Al Baptiste will talk on "Spring Management, Inspection, Cleaning, Feeding, Queen Replacement, Procedure to Build up Colony, How Large a Population is Good and How to Get it, Uniting." Henry Neunzer, with the aid of slides, will speak on "Disease and Control—Other Enemies."

A question period will follow the speakers.

At our November meeting Dick Corrigan won the Christmas Turkey and gave the first lecture of the course.

M. Southwick, Corres. Sec.  
176 Waban Avenue, Waban, Mass.

#### Minnesota Short Course Farm and Home Week January 12-15

TUESDAY, January 12, 1960  
Room 307, Coffey Hall

1:30—

Beekeeping for profit and pleasure—  
K. W. Tucker.

2:30—

Getting acquainted with bees—  
M. H. Haydak.

3:30—

Who can keep bees—  
K. W. Tucker.

#### WEDNESDAY, January 13, 1960

9:00—

The honey bee colony—  
M. H. Haydak

10:00—

Starting right with bees—  
K. W. Tucker

12:15—  
Convocation

1:30—

Honey bee relatives—  
A. A. Granovsky

2:30—

What we should know about honey—  
Barbara B. North

3:30—

Your bees need the best queen—  
K. W. Tucker

7:00 p.m.—

Two-queen management for honey production—

S. B. Ferguson Entomological Aid Division of Plant Industry Minn. State Dept. of Agriculture.

Questions, discussion—

M. H. Haydak, K. W. Tucker, S. B. Ferguson.

#### THURSDAY, January 14, 1960

9:00—

More honey from your bees—  
M. H. Haydak

10:00—

Handling honey—  
S. B. Ferguson

12:15—

Convocation

1:30—

Honeybees and red clover seed—  
A. G. Peterson

2:30—

Microbe hunters 1960—  
T. A. Gochnauer

4:00—

Enemies of bees—  
K. W. Tucker

7:00—

Production and packaging of section comb honey—

E. C. Honl, Commercial Beekeeper, Winthrop, Minnesota

Questions, discussion—

M. H. Haydak, K. W. Tucker, S. B. Ferguson, E. C. Honl

#### FRIDAY, January 15, 1960

9:00—

Honey plants of Minnesota—  
K. W. Tucker

10:00—

Beekeeper and the state—  
D. M. Coe, Director Division of Plant Industry, Minn. State Dept. of Agriculture

12:15—

Convocation

1:30—

Your bees should winter well—  
M. H. Haydak

2:30—

Movies

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1 - 24	\$1.50	\$4.50	\$5.65	\$6.75	\$7.95
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100 - 499	1.30	4.00	5.05	6.10	7.15

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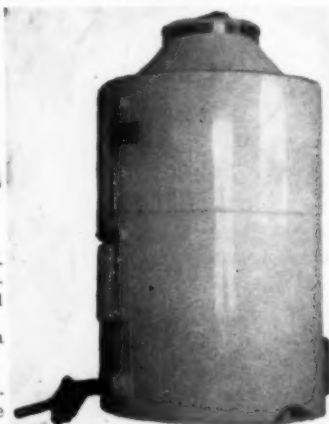
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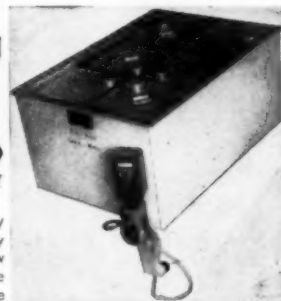
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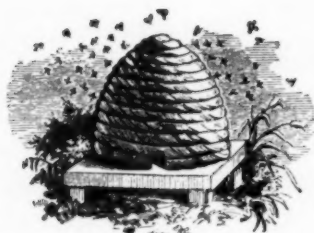
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# Echoes from the Past

From 1861, page 20

## RANGE OF BEES' FLIGHT

The distance to which bees will fly in search of pasturage and to gather honey, has been the subject of much discussion and controversy. I regard it as depending so much on circumstances, that it is rather a matter for observation in each particular locality, than one to which any general rule can be applicable. I conceive it to be the province of each apiarian to study his own location, and to be governed by the circumstances by which he finds himself surrounded. Seasons, climate, the character of the prevalent vegetation, the nature of the cultivated crops, their customary rotation, &c., must all be taken into consideration, as they exert a controlling influence on the resources which the bees can command. As these vary, so also must vary the abundance or scarcity of the pasturage resulting therefrom, and the range of the bees' flight in quest of their coveted treasures must necessarily be influenced and determined thereby.—When distant points present no superior attraction, the bees will certainly not fly far. But when the immediate vicinage withholds what more distant areas offer, their excursions take a wider range, and extend very far. These diversities vary with the varying season; are affected by the prevalent course of the wind; and are influenced by the kind of crop under cultivation. They are governed too by the situation of the locality in which bee culture is prosecuted. On an extensive level plain or prairie, of uniform climate and uniform vegetation, bees do not usually fly far; and there it does not unfrequently happen that they fail to secure the requisite supplies of honey; because, when the ordinary fountains of nectar are dried up, the failure is universal in the entire area to which they have access. In such case, the monotonous character of the vegetation all around necessarily

renders failure and famine synonymous, so far as the bees are concerned. A fertile valley with its adjacent hills presents a more happy combination, and the bees' flight is less limited—extending sometimes to the distance of three or four miles. The earlier-blooming flowers in the bosom of the valley, and the later supplies furnished by the flora of the hillsides, give to bees there located a decided advantage. Short crops or failures are rare in such situations, because a succession of pasturage is offered to the busy gatherers, and provides them with constant employment from spring till fall. Unfavorable weather never cuts off their resource so entirely as to prevent them from providing adequate stores, even in the worst years. But it must not be forgotten that very distant sources of supply, such as are situated two or three miles from the apiary, are never of much account, however ample in themselves, as much time is lost in passing to and fro, and many perish on the journey. Hence it is customary, in many parts of Europe, for the beekeepers to perform a sort of Mahometan miracle in behalf of their cherished charge, and as the pasturage cannot come to the bees, they carry the bees to the pasturage—by transporting their hives thither.

S. S.

From 1861, page 84

He who would become a thorough beemaster and successful beekeeper, must, first of all, study the theory of bee culture, based on a knowledge of the nature and habits of the bee. It is only thus that he can familiarize himself with the principles which are to guide and govern his practical operations. The whole subject will be clearly expanded before his view; and he will, in any case and under any circumstances, be able to decide what is proper to be done, and when to do it. Where as, the mere empiric can never become a successful operator, though furnished with the most minute instructions; because it is impossible to foresee all the contingencies that may arise, or the peculiar phases which may present themselves in any special case. Dif-

ficulties will have to be encountered at almost every step; and he will perpetually be liable to make mistakes—discovering his blunders only when it is too late to apply a remedy. Hence, one who is himself a master, has emphatically said — “STUDY THE THEORY, if you would not remain a bungler all your life! PRACTICE is nothing else than APPLIED THEORY.”

1861

Royal cells containing queens nearly ready to emerge, must be handled with great care when removed from the comb to which they are attached and inserted in another. The embryo is then still soft and delicate, will be injured or crippled if the cell be shaken or accidentally let fall, and defective wings or other malformation may be the result. When inserting a royal cell, we must be careful also to place it so that the bees cannot readily have access to its base, from the rear or the opposite side of the comb, or they will be apt to open it there and destroy the embryo. In such case, a circular opening is made, and the apex and sides of the cell remain closed; and on a cursory examination, the observer would suppose that the queen had not yet emerged, though long since destroyed.

Bees do not consume most honey during extreme cold weather, but during intervals of milder temperature.

Mr. Rosenman suggests that the disease called foul-brood, may be caused by nitrogen gas generated during the winter in a hive not properly ventilated, and insufficiently protected against cold.

A German treatise on bees, published in 1692, says—bees are fond of music; when one flies about your head threateningly, *whistle a merry tune*, and it will immediately become pacified!!!

# —The Market Place—

CLASSIFIED ADVERTISING—Net price 16 cents per word per insertion. Initials, letters or combination of letters as in street address, counted as individual words. No advertisement accepted for less than ten words. Payable cash in advance. Keyed Classified, 25 cents additional.

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CARNIOLAN CAUCASIAN bees and queens. 2 lb. pack \$4.00, 3 lb. pack \$5.00. Untested queens \$1.00 any number. Tillery Bros., Rt. 3, Box 85, Greenville, Ala.

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BECAUSE OF DEATH of my husband, H. R. Bowen, must sell our queen and package business in Williams, California. For details write Edith A. Bowen, Twin Bridges, Montana.

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FRAMES 9-1 1/2 1-100 12c, 100-1000 10c, 1000 or more 8c. SUPERS 9-3/4 depth 1-12 \$1.35, 25-100 \$1.25, 100-1000 \$1.15. Write for free catalog. KEHM BROTHERS APIARIES, Box 346, Rt. No. 1, Grand Island, Nebraska. Located 2 miles North of Drive-Inn-Theater.

10 OZ. CUT-COMB honey in rigid plastic box, extra Fancy. Hilbert Apiaries, 4095 Park Lane, Traverse City, Michigan.

FOR SALE—TRUCK loads of light amber honey. Cans or drums. Processed or unprocessed. Weaver Apiaries, Navasota, Texas.

FOR SALE: Twelve hundred 4-fr. nuclei boxes for transporting. Telescopic screen covers. J. D. Beals, 722 E. Filmore, Harlingen, Texas.

FOR SALE: Domestic Pollen, Royal Jelly. Also Pollen Supplement Dry Mix (You add water and honey). Royal Jelly Enterprises, 1017 Los Carneros Avenue, Napa, California.

ROYAL JELLY capsules (with added vitamins) 25 mg. box of 30, \$2.15, 50 mg. box of 30, \$3.50. New pack (without vitamins) \$7.50 per 100. Beauty Cream 2 Oz. \$2.00. Prairie View Honey Co., 12303 Twelfth St., Detroit 6, Michigan.

FREE CATALOG: Cypress Bee Hives and bee supplies. Save up to 40% on hives that last. Myers Craft Manufacturing Co., Burgaw, North Carolina.

SUPER STRENGTH 100 mg. Royal Jelly capsules in bottles of 100 for \$10.00. Prairie View Honey Co. 12303 Twelfth St., Detroit 6, Michigan.

700 HIVES COMPLETE 10-frame outfit. Excellent honey pollination locations, north central California. Box AW c/o American Bee Journal, Hamilton, Illinois.

Copy for the department must reach us not later than the tenth of each month preceding date of issue. If intended for classified department it should be so stated when advertisement is sent.

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As a measure of precaution to our readers we require reference of all new advertisers. To save time, please send the name of your bank and other references with your copy.

Advertisers offering used equipment or bees on comb must guarantee them free from disease or certificate of inspection from authorized inspector. The conditions should be stated to insure that buyer is fully informed.

## HONEY FOR SALE

WHITE CLOVER HONEY in sixties. Ralph Gamber, 910 State, Lancaster, Pa.

WE CAN SUPPLY NICE white honey. Immediate delivery. Russell Smalley, Beaver, Iowa.

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WANTED—extra white, white and light amber honey in 60 lb. cans. Cloverdale Honey Co., Fredonia, New York.

WANTED—Extra white and light amber honey. Let us ship you the containers. Sell us your honey for CASH on delivery. The Hubbard Apiaries, Manufacturers of Bee Supplies and Corb Foundation, Onsted, Mich.

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WRITE FOR SHIPPING TAGS and current quotations on rendered beeswax. Any amount from one pound up bought. If you have 25 pounds or more, save 25% by letting us work it into foundation for you. Walter T. Kelley Co., Clarkson, Ky.

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WANTED: EXPERIENCED beeman for permanent position. Migratory honey production and Pollination Service. Good truck driver, good habits and reference. VERNON THOMAS RANCH, P.O. Box 8, Huron, California.

HELP WANTED—Seasonal, year around. Experienced or inexperienced. In Texas, North Dakota. Stewart Apiaries, Fairfax, Missouri.

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**INDIAN BEE JOURNAL**, know interesting facts concerning the Honey Bees of India. The only Bee Journal of India published in English. Subscription Rs. 12/- or Sh. 17/6 d (Sterling) or \$2.75 per year (INTERNATIONAL M. O.). Sample copy 2s. or 25 cents. Can be had from: The Managing Editor, Indian Bee Journal, Nainital, U. P., India.

**RANCH MAGAZINE**—Do you find it difficult to secure information about sheep and sheep ranching methods? The **SHEEP AND GOAT RAISER** reaches more sheepmen with more information of range sheep than any magazine published. Subscription 1 yr., \$3.00; sample copy 25c. Box 189, San Angelo, Texas.

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**BEES REMOVED FROM house or tree** to hive without touching either house or bees. Bees will then move honey into hive. Save property, honey and bees with my method. Send \$2.00 for details. Satisfaction guaranteed. George Hawkins, Rt. 1, Lawton, Mo.

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The **Australasian Beekeeper**—The senior beekeeping journal of the Southern Hemisphere provides a complete cover of all beekeeping topics in one of the world's largest honey producing countries. Published monthly by Pender Bros. Pty. Ltd., Box 20, P.O. Maitland, SN, N.S.W., Australia. Subscription by Bank Draft or International M.O. Australia or New Zealand 15/- (\$1.75) per annum (in advance) postpaid. British Isles and British Dominions 18/- (\$2.00) per annum (in advance) postpaid. Other overseas countries 20/- (\$2.30) per annum (in advance) postpaid.

Dr. Jarvis New Book entitled "Folk Medicine" is already in its 12th printing has fine chapter on Honey and Cappings use in sinus trouble, infant feeding, sleep inducing, bedwetting, for coughs, burns, cramps, hayfever, athletes' nutrition, etc. Cloth, 180 pages, postpaid \$3.00. American Bee Journal, Hamilton, Illinois.

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For Support of the Beekeeping Industry

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**AMERICAN BEE JOURNAL**

HAMILTON

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# Crop and Market

by M. G. Dadant

## FINAL CROP

Very little change from the November report as to the final crop. In fact, perhaps, there was just a little less late fall honey harvested, which has in some cases allowed colonies to go into winter with somewhat less than the usual amount of stores. This is reported particularly from Louisiana, Arkansas, and some sections of Wisconsin and Minnesota.

## RETAIL PRICES

While one or two reports are to the effect that there has been some "cutting" in retail prices, the general rule is that prices have held up quite satisfactorily and with no great differential between the various packers. The demand also has held quite well. Two or three reports are to the effect that the Dr. Jarvis book, "Folk Medicine," coming out as it did and issuing at least 200,000 copies, has been of a definite advantage in sparking sales. Unfortunately, some sections are already out of honey. It has always been a mystery to us why the small retailer if he wanted to do any retailing at all, did not continue to retail by furnishing himself with honey from other points so as to keep the market supplied at all times.

## BULK PRICES

In most instances there has been very little change in the bulk price but the general tendency has been towards a "stiffening" of prices, particularly on white and water white honey. Even amber honey comes in this category.

It is true, however, that just as is the case in nearly every holiday season, buyers are not active but prefer to wait until after the January 1 inventories before going on and buying more honey or until their supplies are exhausted.

There is definitely, however, a very strong tendency in the honey market although unfortunately we still see tendencies of a weak market in Wisconsin and Minnesota where ordinarily the market would be about even with that of the rest of the Central West.

Western areas, particularly the Rocky Mountains and farther west, are practically out of white honey and

such holdings as are still in the hands of beekeepers no doubt will reap a definitely satisfactory price.

Reports are to the effect that honey is selling in bulk in the eastern states, particularly New England, as high as 16 cents per pound with very little of it available. Similar conditions exist in New York, although most reports are of a price of about 14 cents.

In the southern areas, we find amber honey in fairly good demand from 9 to 11 cents per pound. Texas suggests a price ranging all the way from 10½ to 13½ cents per pound for good white honey.

In the Central West most reports are of sales in the neighborhood of 12 to 12½ cents; cans returned, as high as 13¼ cents.

Again amber honey is not in as good demand as white. In other words there apparently is more amber honey than is needed for blending in packaging.

The Canadian and European markets are not particularly active. The Canadian market, of course, is affected by the fact that the Ontario crop this year was some 50 per cent or more higher than last year and even though there is a possibility of sales to England, it has had the effect of discouraging very liberal buying except in the extreme northern states where the trucking rates are low.

We have several reports, particularly around the Detroit area, that the effect of the strikes can be very definitely felt in the demand for all food commodities, as well as honey.

Bees practically universally are going into winter quarters in more than average condition except possibly in California. There is still a tendency towards "dryness" in the Rocky Mountain area and the far West and some dry reports extending from Wyoming north, especially through western South Dakota and North Dakota and into northern Minnesota and northern Wisconsin.

All in all, it is our opinion that bees are going into winter quarters in as good a shape, if not better, than a

year ago with as plentiful stores as previously. The honey supplies seem to be definitely limited this year as against more or less of a "glut" a year ago.

This can be readily assumed from the fact that honey under loan as of October 31 in 1959 was less than one million pounds as against over three million pounds a year ago.

We are definitely optimistic as to the disposal of the balance of the 1959 crop at figures not below a year ago and in most instances above what is being paid at the time this is being written.

## Wyoming

Wyoming's 1959 crop is estimated at 2,257,000 pounds, down 37 per cent from the 1958 figures, according to state and Federal Agriculture Departments. Near drought conditions most of the summer limited bloom. The average yield for the state's 37,000 colonies was 61 pounds, compared to 97 pounds in 1958.

Ernest W. Fair  
Colorado



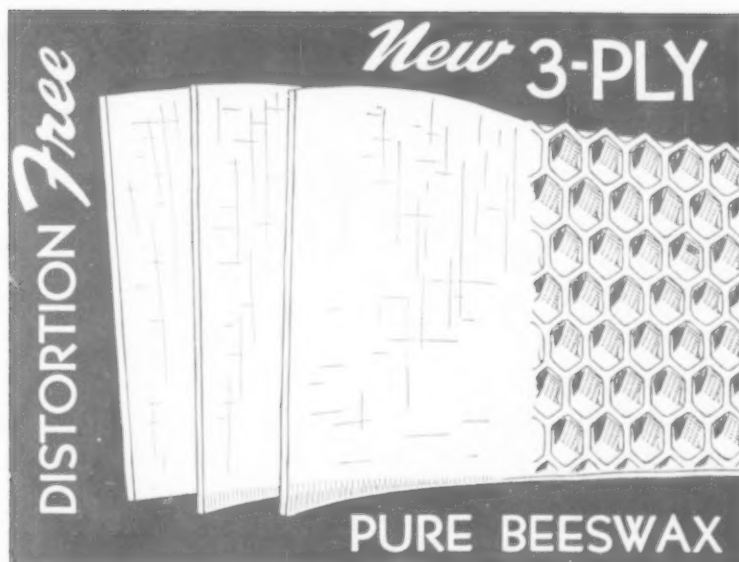
Jack Happ, New Managing Editor  
Of Gleanings in Bee Culture

Schooled in Apiculture and Entomology, and in practical beekeeping, Jack has been interested in beekeeping since the age of twelve and has kept bees himself. He also has had experience in commercial beekeeping and in queen rearing. A real hand shake, Jack and nice going.

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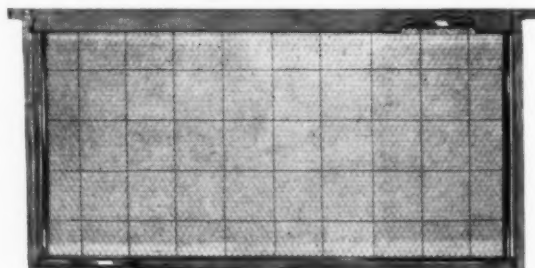
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